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ABSTRACT

This document presents findings of a nationwide study that examined the extent to which American high schools are implementing various restructuring activities. A survey mailed to principals in all of the nation's 10,365 regionally accredited public and private high schools elicited a 33 percent response rate. Seven indicators of major school restructuring are identified: outcome-based education (OBE); alternative assessment; interdisciplinary teaching; school-based management (SBM); block scheduling; business/industry alliances; and use of modems. Findings indicate a trend toward more participative management and leadership at the school level (one-half of the respondents reported shared school governance). Approximately one-quarter of the schools had established OBE, which provides specific learner outcomes for graduation, and about one-half had developed plans for collaborative social services. However, many schools reported limited use of distance learning, modems, and multimedia systems; comprehensive staff development programs; and monetary personnel incentives. Only seven schools reported general use of all seven indicators of restructuring. In conclusion, the rate of change in the nation's high schools overall is highly variable, but on the whole, the traditional institution remains dominant. A total of 8 figures and 11 tables are included. Appendices outline the 5 major components and the 38 specific elements of restructuring and their definitions and give the demographics of responding schools in tabular form. (LMI)

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ERS Report

High School Restructuring: A National Study

by Gordon Cawelti

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by Gordon Cawelti

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Inquiries regarding the National Study of High School Restructuring or the contents of this report may be addressed to Dr. Gordon Cawelti, Executive Director, Alliance for Curriculum Reform, 2000 Clarendon Boulevard, Arlington, Virginia 22201. (703) 525-4035.

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Foreword

Throughout their history, high schools in America have constantly changed in response to student needs, political mandates, societal requirements, and public demands. The educational reforms of the last decade are the continuation of this long process of change. It is important to assess the status of reform measures periodically, in order to obtain an accurate picture of where American secondary education is now and where it is heading in the future.

To meet this need, the National Association of Secondary School Principals was pleased to join with eight other organizations in sponsoring this National Study of High School Restructuring, the first major study of its kind to be carried out in recent years. Based on a national survey of all regionally accredited high schools in the United States, both public and private, this study provides important information to guide and adjust school policy and management. It documents the fact that, despite the difficulties inherent in the change process, high schools today are heavily involved in many aspects of restructuring.

Thanks are due to Dr. Gordon Cawelti, whose long experience in public education and expertise in the field of curriculum development and reform make him eminently qualified to author this report. Appreciation is also due to the Educational Research Service for serving as the primary sponsor, conductor, and publisher of the National Study of High School Restructuring.

I believe that the information contained in this report will be valuable to school leaders and others as they assess, guide, and support restructuring efforts to improve student learning in their schools.

Timothy J. Dyer
Executive Director
National Association of
Secondary School Principals

Preface

This publication, *High School Restructuring: A National Study,* presents the results of a nationwide survey of all regionally accredited public and private high schools in the United States. The purpose of the survey was to determine the extent to which American high schools are actually implementing various restructuring activities that have been proposed to improve student achievement to meet the higher standards of today's society.

Along with the Educational Research Service, the following eight organizations sponsored this National Study of High School Restructuring:

- National Association of Secondary School Principals;
- Association for Supervision and Curriculum Development;
- Middle States Association of Schools and Colleges;
- New England Association of Schools and Colleges;
- North Central Association of Schools and Colleges;
- Northwest Association of Schools and Colleges;
- Southern Association of Schools and Colleges; and
- Western Association of Schools and Colleges.

The survey instrument was mailed with the assistance of each of the six regional accrediting agencies to all accredited high schools in their region.

The Educational Research Service wishes to thank Dr. Gordon Cawelti, Executive Director of the Alliance for Curriculum Reform, for his fine work in directing the study and preparing this report. Dr. Cawelti served as Executive Director of the Association for Supervision and Curriculum Development from 1973 until his retirement from that organization in 1992.

Special recognition is due to three ERS staff members who contributed greatly to the preparation of the report: Deborah Perkins-Gough, Nancy Protheroe, and Lorene Kluge.

Finally, ERS expresses appreciation to each of the more than 3,300 secondary school principals throughout the nation who responded to the National Study of High School Restructuring. Their willingness to provide information about their schools' restructuring efforts made this report possible.

Glen Robinson
President
Educational Research Service

Introduction

Although secondary education in America has been the subject of frequent criticism, the United States has some of the best high schools in the world — schools in which students are motivated to work hard and to perform at high levels on scholastic aptitude and achievement tests. However, there are also many high schools where significant numbers of students are unmotivated, where unacceptable numbers drop out, and where those who graduate may not have even the basic skills needed for either higher education or the workplace. In recent years, these problems have led to a large number of reform activities and serious attempts by school leaders to restructure the way they operate their schools.

Criticisms of American High Schools

A brief look at some of the major criticisms directed at high schools over the past several years can guide discussions at the school level as restructuring is undertaken. The criticisms have been documented in several well-known studies.[1]

• *Low student achievement, both on tests of basic skills and on tests of general knowledge in core subjects.*

It is clear that many students graduate from high school each year with substantial deficits in their ability to write, speak, and compute. Both universities and employers have documented such weaknesses over the years. Colleges and universities contend that many incoming college students need remedial classes. In the corporate world, some new graduates reportedly lack the skills needed to help their employers become more competitive in the international trade arena. While one may legitimately question the extent to which the schools — as opposed to outdated business management practices or poor technology — can rightfully be held responsible for economic conditions, political leaders and the media often demand that the schools do better in preparing the nation's work force.

Deficits in basic skills and in knowledge of academic subjects have also been revealed in state and national assessments and in international comparisons of student achievement.

• *The need to move beyond only teaching basic skills and factual information to developing higher-order intellectual skills such as critical thinking and problem solving, and to provide classroom learning experiences that help students derive their own meaning from learning.*

A persistent criticism centers around the growing recognition that tomorrow's citizens will need to be intellectually equipped with far more than the basic skills traditionally taught in the schools. This includes the need to provide students with the critical thinking and problem solving skills that will be crucial to their economic,

social, and civic success in an increasingly complex world.

• *Curriculum fragmentation, which prevents students from seeing the connections between school subjects and real life.*

The instructional program needs to be designed to better help students see the connections between their academic fare and the real-world problems they will encounter. Most teachers would like to help students recognize the need for continuous learning throughout life, but conventional school schedules provide little opportunity for interdisciplinary teaching. There is also a need to give attention throughout the curriculum to themes or topics of common concern — such as environmental education, character education, or skills such as writing — which now may receive attention in only one class.

• *The impersonality of large high schools, in which many students feel little or no sense of belonging to the institution.*

In many large high schools, students feel little sense of belonging, and no adult in the school knows them well enough to serve as their mentor. While the overall retention rate of high schools has gradually improved over the years, too many students still drop out early because the school has been unable to provide the motivation needed to go on, and their particular talents go untapped. The social aspect of high school life is extremely important to most students, and when it is unsatisfying, students may turn to antisocial behavior such as gang membership and show little interest in the school and its activities.

• *The failure to provide learning experiences that provide students with the skills needed for transition to meaningful jobs in the work world after graduation.*

Most of the attention of school reform has focused on raising academic standards which, while they affect all students, primarily benefit college-bound students. However, concern is now being expressed for the graduates who will immediately enter the work world upon graduation, and who comprise perhaps 50 percent of high school students. Many students do not have access to effective vocational programs in their own schools or other centers. Complicating the situation is the continuing ambivalence of educators and parents over whether to take vocational preparation seriously, or to concentrate on a strong program of general education.

• *The predominance of students as passive learners and the failure to actively engage them in the learning process.*

Perhaps the most recurring criticism in recent years has been that the predominance of lecturing in classrooms creates large numbers of passive students who are not actively involved in the learning process and are not required to assume responsibility for their own achievement. Large-scale studies of classroom life in high schools reveal that students mostly sit and listen to lectures. Research on learning in recent years has revealed that students need to be actively engaged in a variety of learning activities if they are to derive meaning out of the curriculum.

• *Failure to provide the challenging curriculum needed by language-minority students and a culturally diverse student population.*

As a result of a continuing flow of immigrants to the United States, many high schools are faced with a culturally diverse student population with significant numbers of language-minority students who may need new approaches to instruction. Failure to educate these students to high levels of achievement will have large social

and economic costs. The difficulty of the educational task[2] compels bold and imaginative new approaches and additional resources if these students are to achieve reasonable levels of success in high school.

What Is School Restructuring?

School reform activities predate the well-known report *A Nation at Risk,* published in 1983, because of the concerns already discussed. A significant number of alternative approaches to the curriculum or school organization have been either initiated or reinstated from earlier years as a means of helping the schools better respond to student needs.

The term "restructuring" has come into use to describe significant changes designed to contribute to productivity and effectiveness. The definition of school restructuring employed in this study consists of five major components, each of which contains a number of specific elements of restructuring. (See Figure 1 on page 4.)

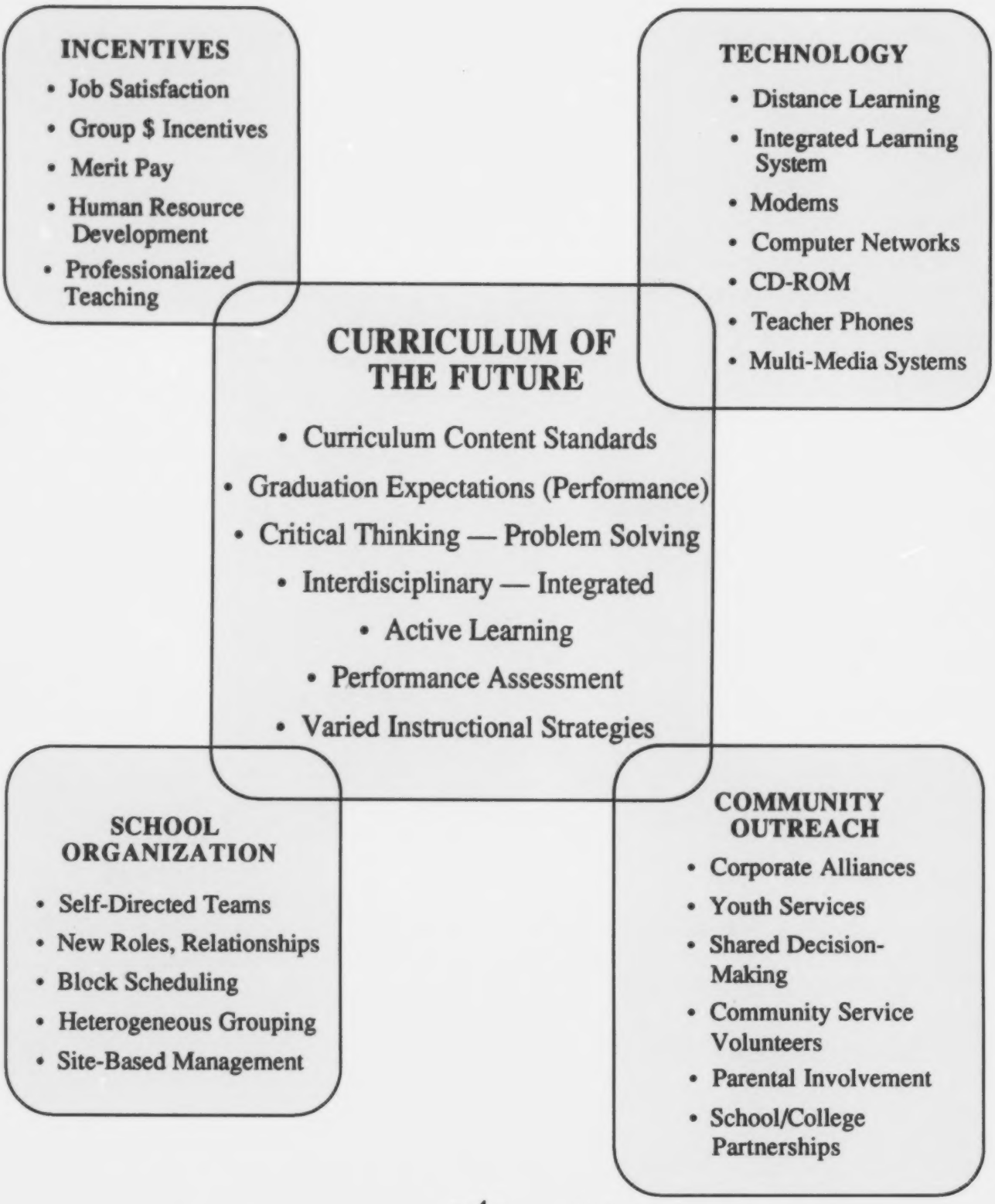
> *The central goal of high school restructuring is improving student performance on important outcomes contained in the curriculum of the future. Thus, restructuring involves designing fundamental changes in the expectations, content, and learning experiences for a curriculum appropriate to tomorrow's world. To achieve this goal, restructuring utilizes creative incentives, different organizational structures, new and improved instructional technologies, and broader collaboration with community agencies and parents.*

This definition suggests that the five major components of high school restructuring must interact, with a focus on improving student performance on the knowledge and skills included in the school's curriculum. Too often, a change in organization such as site based management is called restructuring, but disappointing results by schools pioneering such decentralization plans suggest that the centerpiece of change might better have been the curriculum itself. Changes in organizational structure can facilitate improvement, but it is essential that these changes be focused on the real goal of restructuring, which is improved student achievement.

The probability of significant improvement is highest when several elements of the system are simultaneously redesigned, and when the central component of the restructuring model — curriculum — is kept in the forefront of the reform effort.

To meet the need for information about current high school restructuring efforts, this publication presents the results of the National Study of High School Restructuring, which surveyed all regionally accredited public and private high schools across the nation. The data collected for the study provide important evidence that schools are responding to the need for change. We hope that the information will help school leaders recognize that they have alternatives to present practice, and will enable them to identify how their own restructuring efforts compare to those in other schools. Perhaps most important is the contribution that this study can make in helping to clarify what school restructuring means and in providing direction to high school leaders who have recognized the need for change.

Figure 1.—High School Restructuring Model



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Description of the Study

Purpose and Design of the Study

The purpose of the National Study of High School Restructuring was to document the changes that high schools are undertaking to improve their productivity and effectiveness in serving the needs of youth and the nation.

An extensive survey of the literature on the topic of high school restructuring was conducted, and discussions were held with school reformers and school leaders; as a result, five major components of high school reform were identified:

- curriculum/teaching,
- school organization,
- community outreach,
- technology, and
- monetary incentives.

A trial survey instrument was then developed, containing 38 specific elements that further defined these five major components of restructuring. (See Appendix A on page 73 for the elements and their definitions.) The trial instrument was submitted to 50 high school principals, of whom half were known to be extensively involved in restructuring; the other half were believed to be more representative of principals in high schools not involved extensively in restructuring. Revisions were made based on their comments to produce the final survey instrument.

Respondents to the final survey instrument were asked to indicate whether each element was "in general use," "partially implemented," "planned for next year," or "not planned for next year." In addition, the survey questionnaire asked principals to identify the one change in their school's program that they felt had produced the greatest increase in student learning.

Through the cooperation of the six regional accrediting agencies in the spring of 1993, the survey instrument was mailed to principals in all of the nation's 10,365 regionally accredited public and private high schools. The majority of the high schools not included in the survey were very small schools.

Respondents and Demographics of Schools

Responses were received from principals of 3,380 high schools, or 33 percent of the population surveyed. Of the respondents, 358 (10.6 percent) were principals of private high schools. The respondents were reasonably representative of the total population of high schools in terms of enrollment categories, grades included, kinds of communities served, and whether they were public or private high schools. The demographics of the participating high schools are shown in detail in Appendix B (page 75).

Because this study was not a *sample* survey, but rather a census of the total population of all regionally accredited public and private high schools in the nation, the findings are not subject to sampling variation and represent the informa-

tion supplied by respondents from the total population surveyed.

Readers are cautioned, however, that the data reported here could be subject to possible *non-response* bias to the extent that the non-responding schools are different from the responding schools. Except for the possibilities of non-response differences, the results of this survey can be generalized to the entire population of accredited public and private high schools in the nation.

An attempt was made during the instrument design and tryout stage to deter overly generous reporting of the extent of use of the elements of restructuring. This was done by providing three response categories: "in general use," "partially implemented," or "planned for next year," along with "not planned for next year." This established "in general use" as the most stringent response category and provided the principals with two other categories for indicating at least some involvement with a particular restructuring element in their school. Most references in this report are to the "in general use" data, but all the findings are included in tables for those interested in such detail.

The data are presented here to provide national information on the extent to which specific elements of restructuring were at various stages of use at the time of the survey. In addition, the data are presented to show the extent of use of the restructuring elements among the 50 states, as well as the relationships that exist between use of the restructuring elements and various demographic characteristics of responding schools.

Findings of the Study

The following five sections of the report describe the findings of the National Study of High School Restructuring regarding the extent to which responding high schools were implementing the five major components of restructuring. The components and their specific elements are:

- **Curriculum/Teaching**
  Cooperative Learning
  National Mathematics Standards
  Staff Development In Teaching Strategies
  Thinking Skills
  Outcome Based Education
  School-to-Work Transition
  Alternative Assessment Techniques
  Interdisciplinary Teaching

- **School Organization**
  Shared School Governance
  Site Based Management
  Teacher Team Responsibilities
  Transition to Upper Grades
  Teacher-Advisee System
  School-Within-A-School
  Block Schedule
  Total Quality Management
  Divisional Organization
  Extended School Year

- **Community Outreach**
  Community Use of School
  Allied Youth Services
  Business/Industry Alliances
  School/College Partnerships
  Adult Volunteer Program
  Community Service

- **Technology**
  Video Instructional Materials
  Word Processing Applications
  CD ROM Technology
  Computer Literacy
  Modems
  Multimedia Systems
  Distance Learning
  Integrated Learning System

- **Monetary Incentives**
  Career Ladder Plan
  Administrator Incentive Pay
  Teacher Incentive Pay
  Group Incentive Pay

The elements under each component are discussed in order of their degree of use in responding schools. A bar chart and table at the end of each section present both graphic and tabular summaries of the study findings relating to the specific elements included in that section's restructuring component.

Restructuring Curriculum/Teaching

The eight *curriculum/teaching* restructuring elements chosen for inclusion in this study represent just a few of the key changes going on in high schools today. The movement away from reliance on "seat time" and towards demonstrations of proficiency is time-consuming and complex, but it represents an important paradigm shift. As such changes are undertaken, it is equally important to ensure that the standards or learning outcomes themselves reflect what students will need to know and be able to do in the future.

In an attempt to find a pattern in the kinds of learner outcomes being established to better prepare students for the future, documents from 15 high schools were analyzed to see whether some common curriculum outcomes emerged. These outcomes are in addition to a larger number of more traditional academic standards in such areas as mathematics, science, history, and English.

The following outcomes or standards were found to be established as a requirement in most of the schools that were simultaneously developing multiple assessments to be used in requiring students to demonstrate performance before graduation.

- developing *ethical behavior* and character education as the basis for making decisions and developing a sense of personal and social responsibility.
- developing *civic competence*.
- developing *thinking skills* such as reasoning, critical thinking, and problem solving.
- developing a better understanding of the value of diversity among people and an *international perspective* on important issues.
- developing the skills and understandings of how *technology* is used in an information society, and recognizing the social tradeoffs involved in "progress."
- becoming proficient in analyzing, creating and performing, and understanding the historical context of the *arts*.

While some of these are not necessarily *new* goals for a high school, what is new is that such learner outcomes are being set for all students, who will be expected to learn them before graduation. Serious attention to these emerging learning outcomes will require a more integrated curriculum, since additional separate courses cannot be established within the time limitations of an already-crowded school day.

The following discussion presents the findings for the specific restructuring elements included in the *curriculum/teaching* component, in order of their degree of reported use in responding high schools. The eight restructuring elements selected for inclusion under this component dealt with:

- cooperative learning,
- national mathematics standards,

- staff development in teaching strategies,
- thinking skills,
- outcome based education,
- school-to-work transition,
- alternative assessment techniques, and
- interdisciplinary teaching.

Figure 2 on page 16 summarizes in graphic form the national findings for the *curriculum/teaching* component. Table 1 on page 17 reports these findings by school support type (public or private), enrollment size, and community type.

Cooperative Learning

Definition:

Teachers in one or more departments are using cooperative learning techniques.

Significance:

In recent years, many teachers have undergone training in cooperative learning to learn how to effectively organize their classes into small groups of students, assign the groups specific tasks, and monitor their work. This is perhaps the best-known strategy to encourage students to become more actively involved in learning. Studies have shown that, used correctly, it can increase achievement for some students. An important contribution of cooperative learning is helping students develop the interpersonal skills needed to work together.

Findings:

Cooperative learning was the most widely used restructuring element under the broad category of *curriculum/teaching*. Almost half of the respondents (47.6 percent) reported that cooperative learning was in general use in their schools; an additional 40.4 percent reported that this instructional practice was partially implemented.

Cooperative learning was more likely to be in general use in public schools (49.4 percent) than in private schools (33.0 percent), and was more common in large schools with 1,000 or more enrollment (56.2 percent) than in small schools with less than 500 enrollment (42.5 percent). Schools in suburban communities (57.0 percent) were much more likely to use cooperative learning than were schools in other types of communities.

Summary of findings regarding Cooperative Learning:

In general use — 48 percent
Partially implemented — 40 percent
Planned for next year — 3 percent
Not planned for next year — 8 percent

National Mathematics Standards

Definition:

The math program reflects the standards developed by the National Council of Teachers of Mathematics in 1989.

Significance:

These standards were developed and disseminated in an attempt to reach national agreement on the content and processes required to enable all students to achieve a level of mathematics literacy appropriate to the future. This element shows the progress in attaining broad implementation of such standards after four years, and reveals the work ahead with standards yet to be released in the fields of science, English, history, geography, the arts, foreign language, civics, and physical education.

Findings:

The national mathematics standards were in general use in a large proportion of the responding schools — 46.9 percent. Another third of the schools (35.1 percent) reported these standards to be in partial use.

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Suburban schools (52.6 percent) were more likely to have these standards in general use than were schools in the other types of communities.

Summary of findings regarding National Mathematics Standards:

In general use — 47 percent
Partially implemented — 35 percent
Planned for next year — 6 percent
Not planned for next year — 10 percent

Staff Development in Teaching Strategies

Definition:

A majority of teachers are provided six or more days of school- or district-programmed staff development focusing on expanding their use of varied teaching strategies.

Significance:

Teachers often need to acquire new teaching strategies to enhance student thinking skills or better meet the instructional needs of culturally different students. Experience has shown that the most effective staff development is focused and of sufficient quality and duration to ensure that the teacher acquires the confidence needed to transfer the new skills from the training to the classroom.

Findings:

Slightly over a third of the high schools (34.0 percent) reported that they provided staff development to the extent and of the type defined in the study, but another third (31.5 percent) said that they had no plans to implement this type of staff development in the coming year.

This type of staff development was used to a greater extent in public schools (35.6 percent) than in private schools (21.2 percent), but showed little variation by school enrollment size or community type.

An example of a comprehensive staff development plan was provided by Penn High School in Osceola, Indiana. The school's Career Development Options Plan gives teachers the opportunity to choose from several teaching models to develop new skills through training provided largely by teachers within the district. The elements of quality staff development are featured along with incentives for teachers to expand their repertoire of strategies. As additional training is voluntarily undertaken, points are awarded that provide for travel to conferences or an expenses-paid, two-week study leave for carrying out professional growth plans submitted by teachers.

Summary of findings regarding Staff Development in Teaching Strategies:

In general use — 34 percent
Partially implemented — 29 percent
Planned for next year — 5 percent
Not planned for next year — 32 percent

Thinking Skills

Definition:

A majority of teachers (as a result of staff development activities provided by the district or that they received elsewhere) are using teaching strategies to help develop such student attributes as problem solving and critical thinking.

Significance:

The emphasis on thinking skills has grown out of repeated observations that classroom teaching and testing too often rely on recall of factual knowledge, rather than applying information to new situations or developing habits of the mind such as inquiry, creativity, and critical thinking. The development of thinking skills is seen as

critical to the student's future in a complex society and competitive work situations where employers need people who are able to solve problems as they arise.

Several programs for training teachers to develop student thinking skills have emerged over the last half dozen years. Instructional strategies used to cultivate thinking skills include using good questioning techniques, helping students analyze their thought processes, providing in-depth treatment of fewer topics, and modeling creativity, critical thinking, and problem solving.

Findings:

About a third of the schools (30.9 percent) reported that they had fully implemented thinking skills programs. A larger proportion, almost half (48.6 percent), had partially implemented such programs.

This curriculum restructuring element was more common in private schools (39.7 percent) than in public schools (29.8 percent).

Summary of findings regarding Thinking Skills:

In general use — 31 percent
Partially implemented — 49 percent
Planned for next year — 7 percent
Not planned for next year — 13 percent

Outcome Based Education

Definition:

The school has a clear set of general learner outcomes on which students are or will be expected to demonstrate proficiency prior to graduation.

Significance:

This element reflects an operational plan defining the specific outcomes or standards for the general education curriculum required of all students. Such a plan is often the result of a strategic planning process that the school has undertaken. Typically, the school simultaneously designs a performance assessment system that includes multiple demonstrations and portfolios of student work. This approach to curriculum design, done properly, compels a faculty to define educational excellence.

Outcome based education has encountered opposition in some commu[illegible]nd states because of concerns about the more nontraditional or hard-to-measure outcomes that are defined in some of the plans (for example, character development). This opposition may have slowed or influenced the movement toward outcome based education.

Findings:

About a fourth of the high schools (26.3 percent) reported outcome based education to be in general use, with another third (32.0 percent) having partially implemented this approach, and 14.1 percent reporting that they planned to introduce the change in the next year. More than a fourth (26.8 percent) had no plans to implement this innovation during the coming year.

Outcome based education was more common in private schools (34.1 percent) than in public schools (25.4 percent).

An early innovator was Johnson City High School in Johnson City, New York, which has combined outcome based education with many research-based strategies. High schools in District 214 in Arlington Heights, Illinois, have been involved with this element for many years. Ralston High School in Ralston, Nebraska, has established a program for performance-based exit outcomes for graduation that also features an Individualized Learning Plan.

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Summary of findings regarding Outcome Based Education:

In general use — 26 percent
Partially implemented — 32 percent
Planned for next year — 14 percent
Not planned for next year — 27 percent

School-to-Work Transition

Definition:

The school collaborates with local community colleges and/or businesses to provide training in the skills needed for positions that are likely to be available for them on graduation; such efforts include apprenticeships and "tech prep" programs.

Significance:

Many believe that there is an imbalance of attention in the educational reform movement, with a focus on academic preparation of college-bound students at the expense of doing a better job of preparing the half of each year's graduates who do not go on to college. The federal government is planning to develop occupational skills standards to respond to employers who have complained that graduates lack the skills they need for the work world.

This restructuring element may not be appropriate for all high schools; schools with a very high college sending rate may be less interested in school-to-work transition programs.

Findings:

About a fourth of the responding schools (23.6 percent) reported general use of collaborative school-to-work transition programs with businesses or community colleges, another 40.8 percent had partially implemented such programs, and 12.5 percent indicated such plans for next year. Several responding principals indicated that they felt that the implementation of such programs had been the most important factor in improving student achievement in their high school.

School-to-work transition programs were much more common in public schools (25.3 percent) than in private schools (8.9 percent). In fact, 67.6 percent of the private schools reported no plans to implement such programs in the next year. This finding probably reflects the fact that private schools are more likely to be geared towards college preparation than work force preparation.

Examples of school-to-work transition programs include: the Charles F. Kettering High School in Detroit, Michigan, which offers programs for technical preparation in such fields as business, media, health, transportation, and food management; Escondido High School in Escondido, California, which offers a Career Path program in similar fields plus agriculture and social services; and Okeechobee High School in Okeechobee, Florida, which provides a Tech Prep program in cooperation with Indian River Community College.

Summary of findings regarding School-to-Work Transition:

In general use — 24 percent
Partially implemented — 41 percent
Planned for next year — 13 percent
Not planned for next year — 22 percent

Alternative Assessment Techniques

Definition:

One or more departments has developed and made use of assessment techniques that incorporate use of student portfolios, projects, and/or performance exams geared more closely to adult needs in their fields.

Significance:

Many educators have become critical of standardized tests because of their lack of applicability to the local curriculum and their inadequacy as instruments to measure student achievement in an authentic way. A standardized test of grammar bears little relationship to a student's ability to write well, and a multiple-choice science test does not measure a student's ability to apply modes of scientific reasoning to a laboratory experiment. In response to the need for better assessment, high schools are developing assessment plans that call for portfolios, projects, and other demonstrations of what teachers believe is important for students to know about a specific subject or skills area.

Findings:

About a fifth of the schools (20.2 percent) reported such assessment plans to be in general use. However, a much larger proportion — 42.3 percent — had partially implemented such plans, and another 11.6 percent indicated they would implement such plans the next year. There were no significant variations by school support type, enrollment size, or community type.

An example of an alternative assessment plan is Littleton High School in Littleton, Colorado. The school has established 19 standards for graduation starting in 1995, which will require 36 demonstrations of mastery using authentic assessment techniques. For example, students are required to demonstrate composition skills on three different kinds of writing at an established level of proficiency.

West Warwick High School in West Warwick, Rhode Island, implemented its "Performance Portfolio" during the 1991-92 school year to provide an anecdotal record of student achievement across the curriculum. Each student's portfolio contains examples of experiences that the student gains in each course he or she takes during the three years of high school, demonstrating that the student has met the goals of the course.

Summary of findings regarding Alternative Assessment Techniques:

In general use — 20 percent
Partially implemented — 42 percent
Planned for next year — 12 percent
Not planned for next year — 25 percent

Interdisciplinary Teaching

Definition:

At least one class is team taught by teachers from *different* disciplines in an effort to provide more integrated learning experiences.

Significance:

This approach affords an opportunity to integrate important topics or themes throughout the curriculum, in order to help students see the connections between the knowledge and skills of different disciplines. The move toward a more integrated curriculum has been growing in recent years because of the need to provide students with deeper understandings of complex ideas and connections across subjects.

Findings:

About a fifth of the schools (19.6 percent) reported interdisciplinary teaching to be in general use. Another 26.2 percent of the schools had partially implemented interdisciplinary teaching, and 15.9 percent reported that their schools were planning this change for the next year. A large proportion, 37.8 percent, reported that they had no plans to implement this element in the coming year.

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This approach was more common in large schools (24.2 percent) than in small schools (14.4 percent), and more common in suburban schools (26.0 percent) than in any other community type.

An example of a school that has implemented interdisciplinary teaching is York High School in Yorktown, Virginia. The school's S.A.G.E. program is an interdisciplinary teaching program for 80 ninth graders involving four teachers of science, algebra, geography, and English. The teaching team has a common planning time within their block schedule. The program was expanded to include sophomores during the current school year.

Rham High School in Hebron, Connecticut, has reorganized ninth-grade class schedules to enable teacher to integrate instruction and work across disciplines. Core subjects — math, science, English, and social studies — are grouped into the first part of the school day along with a course in computer skills called Information Management. Students work on long-term projects that incorporate a number of disciplines.

Summary of findings regarding Interdisciplinary Teaching:

In general use — 20 percent
Partially implemented — 26 percent
Planned for next year — 16 percent
Not planned for next year — 38 percent

Summary of Findings for *Curriculum/Teaching*

Figure 2 and Table 1 on pages 16 and 17 present graphic and tabular summaries of the survey findings concerning the restructuring component of *curriculum/teaching*.

The elements of *curriculum/teaching* that had the highest rates of implementation in the responding high schools were *cooperative learning* and the *national mathematics standards*. In both cases, almost half of the schools had these elements in general use, and large additional proportions of the schools had partially implemented the elements.

Lower rates of implementation were reported for elements such as *interdisciplinary teaching* and *alternative assessment*, with only about one in five of the responding schools reporting each of these practices to be in general use.

The survey results suggest that high schools are assuming more responsibility for helping students who will enter the work world, rather than attend higher education, upon graduation. When principals were asked what they felt their school had done that had the greatest impact on student achievement, several cited programs such as "Tech-Prep," which extends the high school training into the community college after graduation. About a fourth of the responding high schools reported some kind of involvement with local community colleges or businesses in providing programs designed to ease the transition from schooling to work.

In general, the survey results indicate that significant changes are underway in both the form and the substance of the high school curriculum. Perhaps the most significant efforts to restructure the high school curriculum are occurring in schools developing comprehensive standards or outcomes on which seniors are expected to demonstrate performance before graduation. This effort involves all departments and requires considerable time to reach community consensus on what these standards should be, and to develop assessment plans that feature projects, perfor-

mance examinations, and other demonstrations of competence on each standard.

In looking ahead, a substantial effort will be required to remain abreast of the many content changes that can be anticipated over the next few years as consensus is reached on curriculum standards in the major subject fields. More effective teaching strategies, instructional interventions, and staff development will be required to attain "world class" standards of student achievement.

Figure 2. – Percentage of High Schools Reporting *Curriculum/Teaching* Elements of Restructuring "In General Use" or "Partially Implemented"

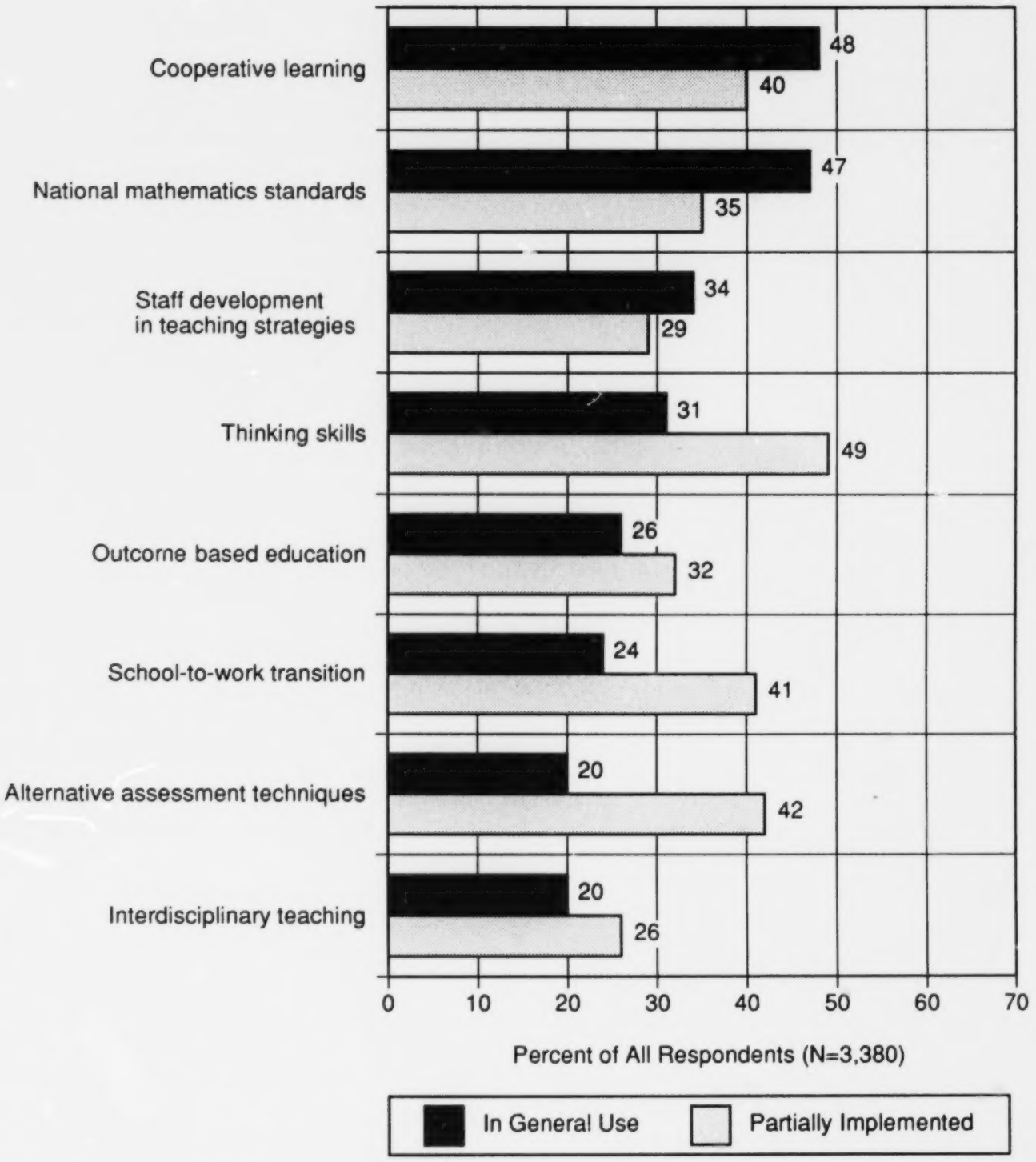

Table 1.—Percentage of High Schools Reporting Implementation of *Curriculum/Teaching* Elements, by Type of Support, Enrollment, and Type of Community

				PUBLIC SCHOOLS ONLY						
				ENROLLMENT			COMMUNITY TYPE			
	ALL RESPONDENTS	SCHOOL TYPE: PUBLIC	SCHOOL TYPE: PRIVATE	LESS THAN 500	500 TO 999	1,000 OR MORE	CITY	SUBURB	SMALL TOWN	RURAL
COOPERATIVE LEARNING:										
IN GENERAL USE	47.6	49.4	33.0	42.5	46.1	56.2	49.9	57.0	41.1	44.4
PARTIALLY IMPLEMENTED	40.4	39.8	45.8	42.2	41.3	36.9	39.3	36.5	43.9	41.9
PLANNED FOR NEXT YEAR	3.0	2.9	3.6	3.8	3.3	2.1	3.5	1.7	3.1	3.4
NOT PLANNED FOR NEXT YEAR	8.2	7.2	16.8	10.5	8.6	4.2	6.5	4.4	10.5	9.6
NO RESPONSE	0.7	0.7	0.8	1.0	0.7	0.6	0.7	0.4	1.4	0.7
NATIONAL MATHEMATICS STANDARDS										
IN GENERAL USE	46.9	46.4	50.8	43.1	45.9	48.9	43.7	52.6	43.7	45.0
PARTIALLY IMPLEMENTED	35.1	34.8	37.4	36.5	34.9	33.6	35.9	32.4	35.7	35.6
PLANNED FOR NEXT YEAR	6.0	6.3	3.4	5.6	6.3	6.7	7.5	5.6	5.7	6.2
NOT PLANNED FOR NEXT YEAR	10.0	10.4	7.3	13.8	10.5	8.2	10.6	7.1	12.9	12.1
NO RESPONSE	2.0	2.1	1.1	1.1	2.4	2.4	2.3	2.3	2.1	1.2
STAFF DEVELOPMENT IN TEACHING STRATEGIES:										
IN GENERAL USE	34.0	35.6	21.2	35.3	31.3	39.2	36.1	36.3	33.5	35.0
PARTIALLY IMPLEMENTED	29.2	28.2	36.9	27.8	29.9	27.3	27.3	29.1	27.3	29.9
PLANNED FOR NEXT YEAR	4.6	4.5	4.5	5.2	4.1	4.3	4.9	3.7	4.1	5.5
NOT PLANNED FOR NEXT YEAR	31.5	30.9	36.9	31.2	34.0	28.2	30.8	30.5	34.3	28.9
NO RESPONSE	0.7	0.7	0.6	0.5	0.6	0.9	0.9	0.5	0.8	0.7
THINKING SKILLS:										
IN GENERAL USE	30.9	29.8	39.7	26.7	30.3	31.6	28.9	31.4	28.1	30.8
PARTIALLY IMPLEMENTED	48.6	49.2	44.7	50.4	46.8	49.6	49.1	49.3	48.5	49.6
PLANNED FOR NEXT YEAR	6.6	6.7	5.9	8.7	6.2	6.0	5.8	7.0	7.6	7.0
NOT PLANNED FOR NEXT YEAR	12.9	13.4	8.7	13.4	15.5	12.1	15.2	11.4	14.8	12.0
NO RESPONSE	0.9	0.9	1.1	0.8	1.1	0.8	0.9	1.0	1.0	0.7
OUTCOME BASED EDUCATION:										
IN GENERAL USE	26.3	25.4	34.1	21.8	25.7	27.3	27.8	24.5	23.4	23.4
PARTIALLY IMPLEMENTED	32.0	32.5	27.1	33.5	32.2	32.1	32.5	30.8	32.6	35.2
PLANNED FOR NEXT YEAR	14.1	15.0	6.7	15.8	14.4	14.8	14.3	16.2	16.2	13.7
NOT PLANNED FOR NEXT YEAR	26.8	26.4	31.0	28.5	26.9	24.9	24.6	27.6	27.1	27.2
NO RESPONSE	0.8	0.7	1.1	0.4	0.8	0.9	0.7	0.9	0.8	0.5
SCHOOL-TO-WORK TRANSITION:										
IN GENERAL USE	23.6	25.3	8.9	21.9	26.7	26.3	27.4	23.9	22.6	25.5
PARTIALLY IMPLEMENTED	40.8	43.5	18.7	41.8	41.2	45.9	45.7	41.3	41.9	43.6
PLANNED FOR NEXT YEAR	12.5	13.6	3.4	12.8	12.9	14.5	13.7	12.6	16.4	12.5
NOT PLANNED FOR NEXT YEAR	22.0	16.7	67.6	22.5	18.2	12.2	12.1	21.0	18.1	17.6
NO RESPONSE	1.1	1.1	1.4	1.0	1.0	1.2	1.1	1.2	1.0	0.9
ALTERNATIVE ASSESSMENT TECHNIQUES:										
IN GENERAL USE	20.2	19.9	22.9	18.9	20.2	20.5	19.9	20.0	19.9	19.8
PARTIALLY IMPLEMENTED	42.3	42.8	38.8	39.9	42.0	45.0	43.3	47.1	37.8	40.0
PLANNED FOR NEXT YEAR	11.6	12.1	7.0	12.0	10.4	13.3	13.4	12.7	9.7	10.8
NOT PLANNED FOR NEXT YEAR	25.3	24.7	30.7	29.0	26.6	20.7	23.2	19.5	32.0	28.7
NO RESPONSE	0.5	0.5	0.6	0.1	0.8	0.5	0.3	0.6	0.6	0.7
INTERDISCIPLINARY TEACHING:										
IN GENERAL USE	19.6	19.7	19.0	14.4	17.6	24.2	19.1	26.0	14.4	16.4
PARTIALLY IMPLEMENTED	26.2	27.0	19.6	25.6	26.6	28.4	27.9	28.2	25.5	24.8
PLANNED FOR NEXT YEAR	15.9	16.5	10.9	16.2	15.1	17.9	18.2	15.8	14.6	15.9
NOT PLANNED FOR NEXT YEAR	37.8	36.3	49.7	43.7	40.3	28.6	34.0	29.5	44.8	42.9
NO RESPONSE	0.5	0.5	0.8	. . .	0.4	0.9	0.7	0.5	0.6	. . .
TOTAL IN COLUMN	3,380	3,009	358	734	967	1,275	1,071	819	513	585

Restructuring School Organization

A major goal of restructuring the school organization is to enlist broader participation in school decision making and operation. This decentralization process requires expanded roles for teachers in the process of governance and planning school improvement activities. At the heart of innovations such as shared school governance is the trend toward professionalizing teaching by involving teachers in instructional teams and various governance councils. While there is much support for this trend, asking teachers to assume additional responsibilities within traditional schedules quickly becomes overwhelming and may distract from their energy for teaching itself.

Another organizational restructuring goal is to make more efficient use of instructional time. Innovations such as the block schedule and divisional organization are meant to increase flexibility so that teachers can vary instructional activities, while the extended school year is proposed as a means of providing more time for student learning.

Still other elements of organizational restructuring aim to make the school a more humane and welcoming environment in order to encourage student learning. School-within-a-school and teacher advisee structures attempt to reduce students' feelings of alienation and disconnectedness by giving them more personal contacts with caring adults.

All of these approaches to restructuring the school organization are efforts to involve people — educators, students, parents, and others — in schooling in more meaningful ways. Advocates believe that such meaningful involvement will create the conditions that will ultimately increase student achievement.

A discussion of the specific restructuring elements included in the *school organization* component follows. Elements of this component were selected for their significance in responding to the common criticisms of high schools previously discussed. The 10 elements included in this component are:

- shared school governance,
- site based management,
- teacher team responsibilities,
- transition to upper grades,
- teacher-advisee system,
- school-within-a-school,
- block schedule,
- Total Quality Management,
- divisional organization, and
- extended school year.

Figure 3 on page 27 reports in graphic form the national findings for the 10 elements of the *school organization* component. Table 2 on page 28 shows the findings by school support type, enrollment size, and community type.

Shared School Governance

Definition:

The school has a mechanism such as a school council which is elected or appointed and provides for involvement of teachers and parents in planning and decision making.

Significance:

A large variety of advisory councils or teams represent a trend away from centralized school administration. Including those who are affected by decisions in the decision-making process is believed to enlist greater understanding and support for the introduction of changes in the system. Schools vary greatly in the degree to which they include parents in formal school governance structures, but teachers, students, and other employees are frequently included.

Findings:

Almost half of the responding high schools (45.2 percent) reported shared school governance in general use. This figure might have been higher if parents had not been included in the survey's definition of shared school governance.

Shared school governance was much more likely to be reported by large schools (55.2 percent) and city schools (50.4 percent) than by small schools (35.3 percent) and those in small towns (36.1 percent) or rural communities (37.8 percent).

An example of shared school governance is a plan for establishing a 13-member Site Committee in the Chiloquin Junior-Senior High School in Chiloquin, Oregon. The committee includes the principal, one classified employee, one patron, three parents, and seven teachers. The committee mission statement specifies that the committee will focus on instructional improvement and staff development issues, basing decisions on 80 percent consensus. Another example is South Mountain High School in Phoenix, Arizona, which employs a collaborative decision-making model in its School Improvement Team to facilitate changes needed for its diverse student body.

Summary of findings regarding Shared School Governance:

In general use — 45 percent
Partially implemented — 31 percent
Planned for next year — 6 percent
Not planned for next year — 17 percent

Site Based Management

Definition:

The school operates under a plan affording wide latitude in delivering an instructional program appropriate for students which may vary from other high schools in the district. (Note: This element is not considered applicable to private high schools.)

Significance:

Site based management grants the school more authority to make its own decisions. This element refers to a formalized way of enlisting broader participation and accountability among the constituents in a particular school by replacing central district requirements and decisions with more school-based power to allocate resources, set directions, and tailor a local instructional program to meet the needs of the student body. Usually, schools are obliged to follow a district curriculum but are encouraged to seek improved student performance through interventions initiated by a local advisory group. Although school site budgeting is a key indicator of total commitment to site based management, most districts have not yet gone this far. Since this restructuring

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element is not applicable to private schools, the findings report public school data only.

Findings:

About a third of the schools (32.5 percent) reported a site based management plan to be in general use, with another third (33.3 percent) reporting site based management to be partially implemented. A more stringent definition of the important components of a site based management plan to include such factors as authority for making broad-based budget decisions would probably have reduced these numbers. Only 4.3 percent said this change was planned for next year, indicating something of a slowdown in the trend that has been observed in this direction.

While site based management may be more applicable to larger districts, where central office roles have been perceived to be inhibitors of change, it is also being adopted in smaller districts across the country. The survey results indicate little difference in implementation of this element by school size or community type.

Summary of findings regarding Site Based Management:

In general use — 33 percent
Partially implemented — 33 percent
Planned for next year — 4 percent
Not planned for next year — 17 percent

Teacher Team Responsibilities

Definition:

Responsibilities for curriculum development and teaching, evaluating student performance, and/or staff development are assigned to one or more teams of teachers with teams provided opportunity for regular meetings.

Significance:

A major restructuring change in the corporate world has been empowering on-line employees to assume full responsibility for quality and productivity. Some high schools are adopting this approach by using teacher teams to plan school improvements. This is one of the most tangible expressions of the teacher empowerment movement. It attempts to improve the traditional departmental organization that exists in most high schools.

Training is required for self-directed teams to be effective, and provisions must be made for team members to meet regularly to plan their work on an ongoing basis. Many high schools are providing training for self-directed teams within departments or across disciplines and delegating responsibility to such teams for continual attention to the appropriateness and effectiveness of teaching. This is a prominent feature when Total Quality Management is introduced, but a school need not necessarily have adopted the TQM philosophy to employ self-directed teams.

Findings:

One in four of the schools (25.0 percent) reported that they had teacher teams in general use, another 30.3 percent had partially implemented such teams, and 8.7 percent were working on such plans for the next year. These figures reflect a growing awareness of the value of helping teachers work toward improvement together. However, more than a third of the schools (34.6 percent) had no plans to implement teacher teams during the coming year.

Private schools were more likely to report general use of teacher teams (32.7 percent) than were public schools (24.0 percent). There were only small differences among school sizes or community types.

An example of teacher teaming is Lebanon High School in Lebanon, Indiana, which has a Core: Re: Learning Team that facilitates the school's restructuring efforts and an Interdisciplinary Studies Team working toward a more integrated curriculum.

Summary of findings regarding Teacher Team Responsibilities:

In general use — 25 percent
Partially implemented — 30 percent
Planned for next year — 9 percent
Not planned for next year — 35 percent

Transition to Upper Grades

Definition:

A largely separate environment is provided for students in the lowest grade in the school to ease their transition into the upper grades.

Significance:

As enrollments in many high schools have expanded, parents and faculty members have become concerned that the institution overwhelms younger students as they enter high school. Many schools have responded to this problem by establishing advisor programs, providing smaller classes and more interdisciplinary work with smaller units, and separating the entering class from the rest of the school as much as possible.

It is important that good planning precede implementation of such transition programs, and that parents and students be involved.

Findings:

Of the respondents, 17.7 percent reported that programs to provide transition to the upper grades were in general use, and another 17.2 percent had partially implemented such programs. However, more than half of the schools (57.2 percent) had no plans to implement such modifications of the typical organizational structure.

Although this element would appear to be more appropriate to larger high schools, the survey results show that smaller high schools and those in small towns (20.9 percent) or rural areas (20.3 percent) were more likely to have transition programs in general use than were city schools (13.7 percent). Private schools (23.7 percent) were also more likely to use transition programs than were public schools (16.8 percent).

An example of a transition program was provided by the Huntington Area High School in Huntington, Pennsylvania, which operates a ninth-grade school-within-a-school to "provide a more nurturing environment for the first-year high school student." Students' core academic courses and lockers are located in the ninth-grade wing of the building. Ninth-grade students are also provided with a common lunch time, an integrated curriculum, group activities, and small-group and individual counseling as needed.

Summary of findings regarding Transition to Upper Grades:

In general use — 18 percent
Partially implemented — 17 percent
Planned for next year — 6 percent
Not planned for next year — 57 percent

Teacher-Advisee System

Definition:

Each teacher is assigned a group of students who are provided with a "home base" for academic, vocational, or personal assistance/counseling; groups meet at least 20 minutes per day.

Significance:

Many high schools have traditionally grouped students by home room. Teacher-advisee systems

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carry this idea further by expanding the responsibility of the teacher for counseling students and getting to know them. In the often impersonal world of the high school, such one-to-one contact with a specific, caring adult can increase students' sense of belonging and self-esteem.

Findings:

About a quarter of the responding schools reported that they had fully (11.7 percent) or partially (13.4 percent) implemented teacher-advisee programs, but 63.1 percent had no plans to implement such programs in the next year.

Twice the proportion of private schools (21.8 percent) than public schools (10.5 percent) had teacher-advisee programs in general use.

Such a program has existed for many years at New Trier High School in Winnetka, Illinois, where selected faculty members serve as teacher-advisers for 30 students, are given a reduced teaching load for this purpose, and meet for 27 minutes each day. An Advisor Program is also being used in Wilde Lake High School in Columbia, Maryland, in order to ensure that there is an in-depth knowledge of each student by at least one adult.

Summary of findings regarding Teacher-Advisee Systems:

In general use — 12 percent
Partially implemented — 13 percent
Planned for next year — 11 percent
Not planned for next year — 63 percent

School-Within-A-School

Definition:

The school-within-a-school concept is used to create smaller student bodies to encourage student feelings of involvement and belonging.

Significance:

This idea, sometimes called a vertical house plan, is more appropriate for large high schools and has been used off and on for several years. The most common pattern is to establish three or four smaller schools within a larger institution, each of which includes a cross section of ninth through 12th graders with largely its own faculty and student activities. These houses may or may not have a particular instructional focus.

Originating in Great Britain with houses of 100-300 students, the U.S. versions have tended to be much larger, and usually still maintain only one varsity athletic program for the entire school. Use of what are called tutors in Great Britain is more often reflected as an adviser program here. The idea remains one of the most viable plans for breaking up "bigness" in the American high school.

Findings:

About 1 in 10 schools (11.5 percent) reported general use of a school-within-a-school, and another 13.5 percent reporting partial implementation. However, 65.4 percent had no plans for instituting such a program during the next year. As would be expected, such plans were more common in large schools (12.8 percent) than in small schools (9.1 percent).

Several schools provided examples of school-within-a-school structures. Reynolds High School in Troutsdale, Oregon, is organized into three houses of 320 students each and one house of 80 students in order to personalize each student's learning experiences in successfully attaining his or her Certificate of Mastery. Polytechnic High School in Long Beach, California, has a diverse student population of 3,900 students who attend smaller "academies" of 150-200 students that focus on one of two areas: Advanced Place-

ment courses, or careers in international commerce. Plans are underway to establish half a dozen more academies that will focus on such areas as technology, the arts, English language development, and marketing. A similar plan, with different areas of curriculum focus, is underway in Franklin High School in Stockton, California.

Summary of findings regarding School-Within-A-School:

In general use — 12 percent
Partially implemented — 14 percent
Planned for next year — 8 percent
Not planned for next year — 65 percent

Block Schedule

Definition:

At least part of the daily schedule is organized into larger blocks of time (more than 60 minutes, for example) to allow flexibility for varied instructional activities.

Significance:

The traditional six- or seven-period day necessarily involves frequent class changes and time lost, multiple preparations for teachers, and little opportunity for interdisciplinary work. Such a structure tends to discourage using a variety of learning activities and probing ideas in depth.

This important schedule change typically allows students to accumulate the credits they need for graduation through four periods of 90-minute duration a day. Its major value is to enable teachers to use a variety of teaching activities in these extended periods, and to greatly reduce the number of students seen by teachers in their classes each day. It is much simpler to manage than the computer-generated flexible schedule tried by many schools several years ago, and affords the flexibility needed to provide appropriate instruction for a student body with diverse needs.

Findings:

In addition to about one fourth of responding schools that were already fully (10.9 percent) or partially (12.1 percent) employing this schedule, some 15.4 percent reported that they planned to introduce it during the next school year. Private schools were somewhat more likely to report using the block schedule (14.5 percent) than were public schools (10.5 percent).

An example is Thomasville High School in Thomasville, North Carolina, where a block schedule of four 90-minute periods enables teachers to get to know their students better and to vary instructional activities. A similar schedule is used in Mountain View High School in Bend, Oregon, where the four periods are augmented by a daily 30-minute "focus" period, which enables students to work on projects or seek additional help from teachers. Faculty and student evaluations of the now three-year-old block schedule at the Roy Wasson High School in Colorado Springs, Colorado, tend to be favorable and indicate that it affords teachers more preparation time for their classes.

Summary of findings regarding Block Schedule:

In general use — 11 percent
Partially implemented — 12 percent
Planned for next year — 15 percent
Not planned for next year — 61 percent

Total Quality Management

Definition:

Significant training has been provided in the Deming principles such as removing ratings and quotas, creating trust, and applying team

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approaches to the improvement of quality instruction, and efforts to apply these are underway.

Significance:

This philosophy is being examined by many schools to determine what can be learned from its application in the corporate world, where international competition has compelled companies to focus on drastically improving the quality of their goods and services. The plan provides for focusing broad attention on the needs of the "client," using tools such as flowcharts and diagrams to analyze causes of problems, and reducing variation in the quality of services provided.

This management philosophy has developed very rapidly during the past three or four years. However, it takes several years to implement and sustain TQM, and in many schools its earliest applications have been limited to such matters as administration rather than instruction. At the moment, interest remains rather high, perhaps because of TQM's compatibility with systemic reform.

Findings:

While only 9.2 percent of the responding schools said that they had TQM in general use, a much larger proportion (25.7 percent) said that they had partially implemented this restructuring element. But over half of the schools (54.0 percent) had no plans to implement TQM in the next year.

The survey found that TQM was in somewhat greater use among private schools (14.0 percent) than among public schools (8.5 percent). There were no significant variations by school size or community type.

The Mt. Edgecumbe High School in Sitka, Alaska, was an early innovator with TQM. Leadership has been provided in refining the philosophy in such districts as the Newton Public Schools in Newton, Connecticut, and the Burlington Public Schools in Burlington, New Jersey.

Summary of findings regarding Total Quality Management:

In general use — 9 percent
Partially implemented — 26 percent
Planned for next year — 10 percent
Not planned for next year — 54 percent

Divisional Organization

Definition:

For planning and scheduling purposes, teachers are organized into a few broad curricular areas rather than traditional departments.

Significance:

Some believe the traditional departmental structure used in most high schools is an endangered species because it has not been properly designed to be workable. One criticism is that it creates built-in curriculum fragmentation and low levels of communication between teachers. The divisional organization has been designed to provide perhaps half a dozen divisions rather than a dozen departments, with various subject-area teachers logically combined into a larger unit in order to facilitate communication and cooperative planning.

Findings:

Only 8.3 percent of the responding high schools had divisional organization in general use, with another 11.9 percent having partially implemented such a structure. Almost three-fourths of the schools (73.4 percent) said that they had no plans to implement divisional organization next year.

Small schools (13.4 percent) and rural schools (13.0 percent) were more likely to report general use of divisional organization than were large schools (5.5 percent) or those in urban (6.6 percent) or suburban (5.9 percent) communities.

An example of this innovation is Florin High School in Elk Grove, California, which spent considerable time planning for its opening with a divisional organization in order to ensure that a more integrated curriculum would be provided for its large faculty and student body.

Summary of findings regarding Divisional Organization:

In general use — 8 percent
Partially implemented — 12 percent
Planned for next year — 6 percent
Not planned for next year — 73 percent

Extended School Year

Definition:

The school year has been extended to provide 200 days or more of instruction each year.

Significance:

Because the school year in the United States is shorter than in several other countries, it has been recommended by some that the year be extended to provide more instructional time. Although some schools have moved to a year-round basis, this does not necessarily entail increasing the total number of days.

Findings:

This restructuring element was found to exist in a very small percentage of the responding schools; fewer than 2 percent of the high schools reported that they had any degree of implementation of the extended school year. A full 97.4 percent of the responding high schools reported no plans to implement an extended school year.

Summary of findings regarding Extended School Year:

In general use — 0.7 percent
Partially implemented — 0.7 percent
Planned for next year — 0.3 percent
Not planned for next year — 97 percent

Summary of Findings for *School Organization*

Figure 3 and Table 2 on the following pages present tabular and graphic summaries of the survey findings regarding the high school restructuring component of *school organization*.

Under this component, the restructuring element that was in widest use among responding high schools was *shared school governance*. Almost half of the responding schools indicated that they had fully established some kind of mechanism for involving parents and teachers in the decision-making process, and another third reported such a mechanism to be partially implemented.

Site based management was also in general use or partially implemented in a large proportion of responding schools — almost two thirds. This decentralization represents a fundamental change in school management, and experience has shown that it takes several years to establish new roles and relationships between the people involved in the school and at the central office level. Nonetheless, this study suggests that the transition to more democratic school governance continues.

Establishment of *teacher teams* that meet regularly as they assume a broad responsibility for planning improvements was reported by about one-fourth of the high schools, although a larger percentage said this idea was partially implemented.

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Working in teams is related to the management philosophy called *Total Quality Management*. Although fewer than 1 in 10 high schools reported full use of TQM, this appears to be a growing element of restructuring, with 1 in 4 having TQM in partial implementation, and another 1 in 10 planning to initiate this management approach next year. Because of the complexity of this approach, it is difficult to say from these results whether the respondents had implemented only a few of the program's features, or whether they had adopted a comprehensive approach to a continuous quest for quality. It is also too early to tell whether the interest in the TQM movement will persist or fade in the years ahead.

Relatively small proportions of the responding high schools have fully implemented several restructuring elements designed to create smaller learning communities and to provide a more personalized education: the *school-within-a-school*, the *teacher-advisee* system, and programs to provide *transition to the upper grades*.

Also used by relatively small proportions of the respondents (about 1 in 10) were the *block schedule and divisional organization*, two restructuring elements designed to increase the flexibility of instruction and reduce fragmentation of the curriculum. Use of the block schedule appears to be growing, however; 1 in 7 high schools reported that they were planning to implement the block schedule the following year.

The organization restructuring element reported by the fewest high schools was the *extended school year*, reported to be in "general use" in less than 1 percent of the responding schools.

In summary, it is clear from this study that many high schools are shifting the paradigm away from traditional school modes of operation. These high schools are in the process of restructuring their organization to enlist broader participation in school decision making, to make better use of instructional time, and to make better use of human resources.

Figure 3. – Percentage of High Schools Reporting *School Organization* Elements of Restructuring "In General Use" or "Partially Implemented"

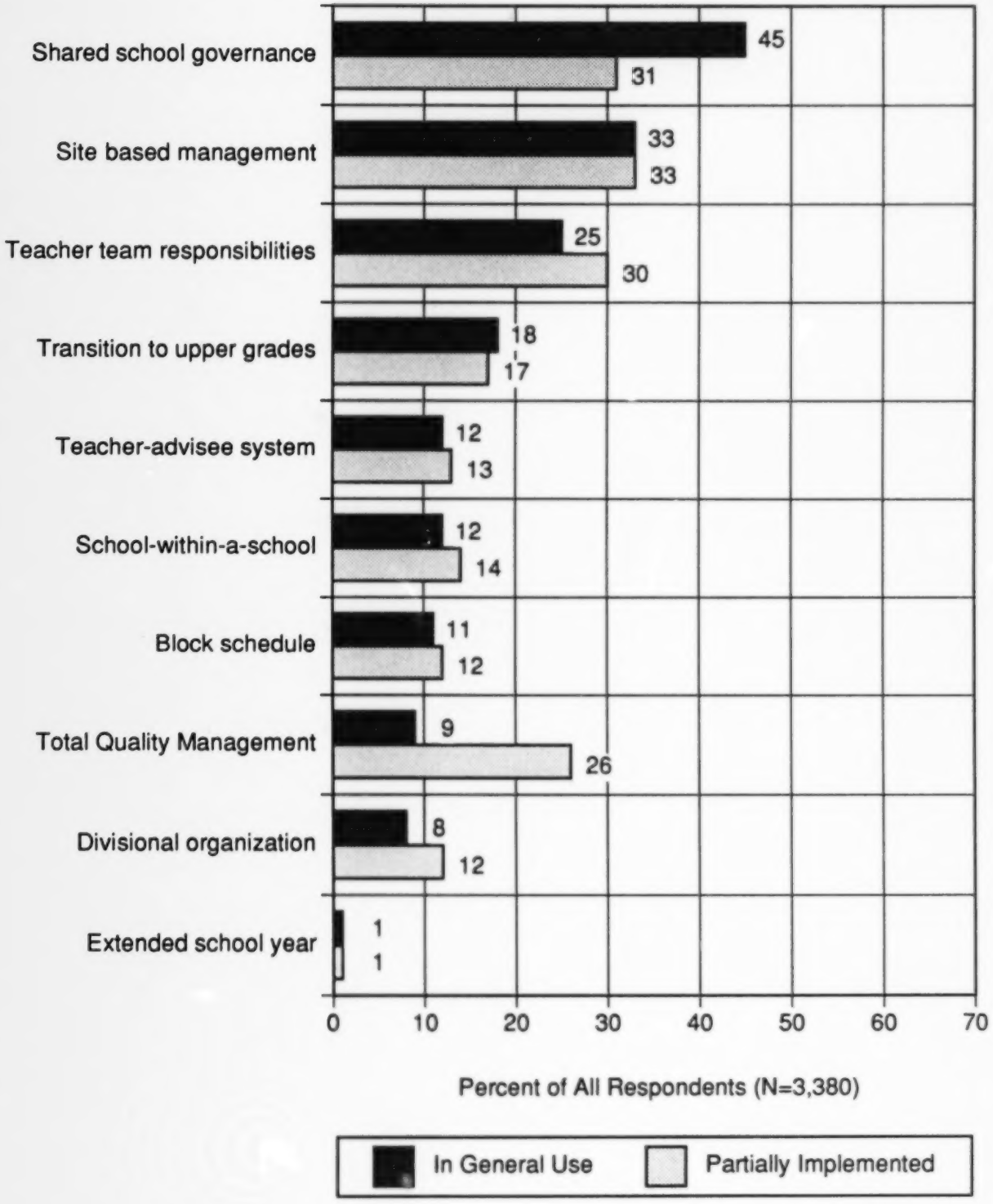

Table 2.—Percentage of High Schools Reporting Implementation of *School Organization* Elements, by Type of Support, Enrollment, and Type of Community

	ALL RESPONDENTS	PUBLIC SCHOOLS ONLY: SCHOOL TYPE: PUBLIC	PRIVATE	ENROLLMENT: LESS THAN 500	500 TO 999	1,000 OR MORE	COMMUNITY TYPE: CITY	SUBURB	SMALL TOWN	RURAL
SHARED SCHOOL GOVERNANCE:										
IN GENERAL USE	45.2	44.9	48.3	35.3	38.9	55.2	50.4	47.6	36.1	37.8
PARTIALLY IMPLEMENTED	31.0	30.4	36.3	31.1	35.0	26.6	29.7	28.3	34.3	31.6
PLANNED FOR NEXT YEAR	6.0	6.3	3.4	6.9	7.1	5.3	6.0	5.6	6.6	7.5
NOT PLANNED FOR NEXT YEAR	17.1	17.8	10.9	26.4	18.6	12.1	13.2	17.8	22.6	22.7
NO RESPONSE	0.6	0.6	1.1	0.3	0.4	0.9	0.7	0.6	0.4	0.3
SITE BASED MANAGEMENT:										
IN GENERAL USE	36.5	36.5	. . .	36.8	35.4	37.3	36.6	35.7	38.0	35.2
PARTIALLY IMPLEMENTED	37.4	37.4	. . .	36.2	37.2	38.0	39.4	37.5	33.3	37.4
PLANNED FOR NEXT YEAR	4.9	4.9	. . .	4.2	5.4	4.9	5.6	4.6	4.5	4.1
NOT PLANNED FOR NEXT YEAR	19.6	19.6	. . .	20.3	20.4	18.5	17.4	20.6	21.1	21.4
NO RESPONSE	1.7	1.7	. . .	2.5	1.7	1.3	1.0	1.6	3.1	1.9
TEACHER TEAM RESPONSIBILITIES:										
IN GENERAL USE	25.0	24.0	32.7	24.8	23.3	24.2	23.7	23.7	23.8	25.1
PARTIALLY IMPLEMENTED	30.3	30.2	31.3	29.2	29.1	31.5	31.1	29.4	31.2	28.5
PLANNED FOR NEXT YEAR	8.7	8.9	7.0	9.0	8.5	9.3	9.5	8.4	8.4	8.7
NOT PLANNED FOR NEXT YEAR	34.6	35.5	28.5	36.2	37.5	33.4	34.4	36.3	35.5	36.6
NO RESPONSE	1.4	1.5	0.6	0.8	1.7	1.7	1.3	2.2	1.2	1.0
TRANSITION TO UPPER GRADES:										
IN GENERAL USE	17.7	16.8	23.7	20.6	16.9	14.6	13.7	15.9	20.9	20.3
PARTIALLY IMPLEMENTED	17.2	17.4	15.9	18.7	17.8	16.1	17.5	14.7	17.5	21.2
PLANNED FOR NEXT YEAR	6.2	6.8	1.7	5.2	6.3	8.1	7.2	7.7	4.5	6.2
NOT PLANNED FOR NEXT YEAR	57.2	57.4	54.7	54.6	57.8	59.1	59.5	60.2	56.5	50.9
NO RESPONSE	1.8	1.6	3.9	1.0	1.2	2.1	2.1	1.6	0.6	1.4
TEACHER-ADVISEE SYSTEM:										
IN GENERAL USE	11.7	10.5	21.8	12.8	10.1	9.3	10.6	8.1	12.9	11.6
PARTIALLY IMPLEMENTED	13.4	12.1	24.0	14.2	12.8	10.4	12.3	10.4	13.8	12.3
PLANNED FOR NEXT YEAR	11.0	11.8	4.2	13.4	10.4	11.8	12.1	10.9	12.7	11.6
NOT PLANNED FOR NEXT YEAR	63.1	64.8	48.9	59.4	65.9	67.2	64.1	69.8	59.8	63.8
NO RESPONSE	0.8	0.8	1.1	0.3	0.7	1.2	0.8	0.9	0.8	0.7
SCHOOL-WITHIN-A-SCHOOL:										
IN GENERAL USE	11.5	11.0	15.6	9.1	9.9	12.8	12.8	11.0	8.8	9.6
PARTIALLY IMPLEMENTED	13.5	14.1	8.7	7.9	12.4	19.1	17.4	15.0	9.4	10.9
PLANNED FOR NEXT YEAR	8.0	8.7	1.7	5.4	6.4	12.4	12.6	8.2	5.7	5.0
NOT PLANNED FOR NEXT YEAR	65.4	64.7	70.7	75.6	70.5	54.0	55.6	64.7	75.0	72.8
NO RESPONSE	1.6	1.4	3.4	1.9	0.7	1.7	1.7	1.1	1.2	1.7
BLOCK SCHEDULE:										
IN GENERAL USE	10.9	10.5	14.5	10.1	11.1	10.4	9.9	10.1	10.7	11.6
PARTIALLY IMPLEMENTED	12.1	12.2	11.2	9.4	10.5	15.0	14.3	11.6	10.5	10.1
PLANNED FOR NEXT YEAR	15.4	16.6	6.1	15.4	15.5	17.9	17.4	14.8	15.6	18.3
NOT PLANNED FOR NEXT YEAR	61.1	60.4	67.3	65.0	62.6	56.2	58.0	63.0	63.0	59.7
NO RESPONSE	0.4	0.4	0.8	0.1	0.3	0.6	0.5	0.5	0.2	0.3
TOTAL QUALITY MANAGEMENT:										
IN GENERAL USE	9.2	8.5	14.0	7.9	9.7	8.1	8.8	8.7	8.0	8.2
PARTIALLY IMPLEMENTED	25.7	26.1	22.9	22.2	24.0	29.6	27.3	27.0	22.6	25.5
PLANNED FOR NEXT YEAR	9.9	10.4	6.4	8.9	9.9	11.8	12.0	9.8	7.4	10.8
NOT PLANNED FOR NEXT YEAR	54.0	54.0	55.0	60.2	55.6	49.0	50.6	53.6	61.4	54.5
NO RESPONSE	1.2	1.1	1.7	0.8	0.7	1.5	1.4	1.0	0.6	1.0
DIVISIONAL ORGANIZATION:										
IN GENERAL USE	8.3	8.2	8.1	13.4	7.8	5.5	6.6	5.9	9.9	13.0
PARTIALLY IMPLEMENTED	11.9	11.7	14.0	15.9	10.0	10.4	11.2	9.8	13.6	13.7
PLANNED FOR NEXT YEAR	5.5	5.8	2.8	5.9	5.2	6.2	6.8	4.5	6.4	5.5
NOT PLANNED FOR NEXT YEAR	73.4	73.3	74.0	64.3	76.5	76.5	74.2	79.0	69.4	67.0
NO RESPONSE	0.9	0.9	1.1	0.5	0.5	1.4	1.1	0.9	0.6	0.9
EXTENDED SCHOOL YEAR:										
IN GENERAL USE	0.7	0.7	0.8	0.3	0.4	1.1	1.5	0.1	0.4	0.3
PARTIALLY IMPLEMENTED	0.7	0.7	0.8	0.7	0.5	0.7	0.7	0.4	1.2	0.3
PLANNED FOR NEXT YEAR	0.3	0.3	0.6	0.4	0.1	0.3	0.3	0.2	. . .	0.5
NOT PLANNED FOR NEXT YEAR	97.4	97.4	97.2	98.2	97.9	96.6	96.5	98.3	97.3	98.1
NO RESPONSE	0.9	1.0	0.6	0.4	1.0	1.3	1.0	1.0	1.2	0.7
TOTAL IN COLUMN	3,380	3,009	358	734	967	1,275	1,071	819	513	585

NOTE: THE COLUMN FOR PRIVATE SCHOOLS INCLUDES PAROCHIAL OR DIOCESAN, PRIVATE-RELIGIOUS, AND PRIVATE-NONRELIGIOUS SCHOOLS.

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Restructuring Community Outreach

It has become increasingly apparent that many schools have difficulty coping with the myriad of challenges brought to them by a student body with diverse human needs. Clearly, many high schools cannot, with their limited resources, attend to both the academic needs and the social service needs of their students. Communities, businesses, and higher education institutions all have their roles to play. All of these entities have a stake in improving education, and should be involved with the schools' restructuring plans.

While a number of mechanisms exist for community involvement in the educational process, many high schools still appear to operate in relative isolation. It is clear that the problems faced by today's youth in most communities will not be alleviated without a broader participation of other agencies in a more integrated fashion.

The following information reports the findings for the six elements of *community outreach* included in this study:

- community use of school,
- allied youth services,
- business/industry alliances,
- school/college partnerships,
- adult volunteer program, and
- community service.

The findings for the restructuring component of *community outreach* are shown in graphic form in Figure 4 (page 34). Table 3 on page 35 shows the results by public/private schools, enrollment size, and community type.

Community Use of School

Definition:

The school is open on a daily basis before and/or after school for use by the community for recreation, education, and civic purposes.

Significance:

Justifications for community use include the idea that taxpayers have a right to use the facilities they support, and they are more likely to become involved with the school if they feel welcome. In many smaller communities, the high school is the social center of the community. In other types of communities, however, the management and supervision problems created by community use have sometimes restricted access to the school.

Findings:

More than half of the responding schools (59.1 percent) said they had fully implemented community use of the school facilities, and an additional one-fourth (24.6 percent) had partially implemented such use.

Far more public schools (62.7 percent) than private schools (29.6 percent) reported community use of the school. Suburban schools were more likely to report community use of their facilities (67.3 percent) than were schools in other settings. However, the survey found only small

differences between city schools (59.6 percent) and their rural or small-town counterparts (61.0 percent and 64.5 percent respectively).

Summary of findings regarding Community Use of School:

In general use — 59 percent
Partially implemented — 25 percent
Planned for next year — 1 percent
Not planned for next year — 15 percent

Allied Youth Services

Definition:

School personnel coordinate efforts with community medical, law enforcement, and/or other social services to insure that the needs of students are met.

Significance:

Many high school students and faculty need to have ready access to the agencies that can help students in areas such as drug abuse, family conflict, and emotional problems. Very often, other agencies plus the school are needed to address such problems, and mechanisms need to be established to ensure prompt response in a coordinated fashion. This element is often referred to as "integrated services."

Findings:

About half of the responding schools (49.9 percent) reported that this element was in general use, and another third (34.9 percent) reported that it was partially implemented.

Use of integrated youth services was more common in public schools (51.4 percent) than in private schools (38.3 percent).

An example of allied youth services is the Family Resource and Youth Service Center housed in Somerset High School in Somerset, Kentucky. This center, an outgrowth of the Kentucky Education Reform Act, helps students who need physical and mental health assistance, day care facilities, and other social services. In another example, Hoover High School in San Diego, California, enlists the support of a community-based agency for help with delinquency prevention, counseling, and other school-based social services. At Libby High School in Toledo, Ohio, the Libby Project involves many community agencies in a program of support services to enhance the mental and physical well-being of students.

Summary of findings regarding Allied Youth Services:

In general use — 50 percent
Partially implemented — 35 percent
Planned for next year — 2 percent
Not planned for next year — 13 percent

Business/Industry Alliances

Definition:

One or more businesses in the community routinely provides resources, consultation, or learning experiences for students.

Significance:

Many commercial firms, realizing their responsibility for the future workers and citizens in their community, are assisting high schools in a variety of ways. Assistance ranges from excusing specific employees from work so that they may participate in school functions or assume school responsibilities, to consulting on technology plans, to providing scholarships for graduates. Schools tend to be wary of certain free materials provided by some companies, but other educational materials have proven to be valuable.

Findings:

Almost half of the respondents (45.5 percent) reported that business/industry alliances were in general use in their school, and another third (33.7 percent) said such alliances were partially implemented.

This element tended to be in place more frequently in larger schools (55.3 percent) and city schools (57.4 percent) than in small schools in other types of communities. The practice was also more common among public schools (48.2 percent) than private schools (23.7 percent).

The survey yielded information about a number of exemplary business/industry alliances. For example, Sandia High School in Albuquerque, New Mexico, has enlisted the support of its business partners in helping with the school's restructuring process. Woodward High School in Cincinnati, Ohio, cooperates with Proctor and Gamble to provide a mentoring program involving 100 P & G employees who help work on dropout prevention. And the Pratt and Whitney Division of United Technologies has loaned several of its engineers to East Hartford High School in East Hartford, Connecticut, to work with advanced math and science students.

Summary of findings regarding Business/Industry Alliances:

In general use — 46 percent
Partially implemented — 34 percent
Planned for next year — 4 percent
Not planned for next year — 17 percent

School/College Partnerships

Definition:

The school is regularly involved with one or more nearby colleges or universities in efforts directed toward improving teacher training, staff development, or preparing students for school/college transition.

Significance:

High schools and higher education institutions need each other, and collaboration between the two offers great potential for helping with the transition from school to college, shaping university research to meet the pressing needs of the schools, and improving teacher preparation. A large number of school districts and colleges are already engaged in minor collaboration, but more significant partnerships between high schools and colleges are now beginning to emerge.

Findings:

Over a third of the schools (36.7 percent) reported high school/college collaboration to be in general use. This response may indicate periodic use of university personnel for staff development rather than more ambitious projects.

For many very small high schools in rural areas, implementation of this element is much less feasible. Therefore, it is not surprising that the survey results show high school/college partnerships to be less common in small-town schools (31.2 percent) and rural schools (34.7 percent) than in city schools (41.6 percent).

An example of school/college partnerships is the extensive alliance between high schools in District 60 in Pueblo, Colorado, and the University of Southern Colorado. This alliance provides maintenance services, reduces administrative costs, and has created 19 partnerships designed to improve student learning, restructure the curriculum, and improve teacher training. Foundation funds obtained by the alliance are focused on improving graduation, college-going, and attendance rates of students in the school district.

Another example is the Brandon/Oxford Professional Development School, a collaborative

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partnership among the Brandon Schools, Oxford Schools, Oakland University, and Oakland Intermediate School District in California. The partners work together to create increased educational opportunities for the school's students. The traditional school week is reorganized to allow for regular weekly staff development time.

Summary of findings regarding School/College Partnerships:

In general use — 37 percent
Partially implemented — 34 percent
Planned for next year — 3 percent
Not planned for next year — 26 percent

Adult Volunteer Program

Definition:

An ongoing program exists to recruit and coordinate efforts of adults who volunteer to tutor or assist with other school functions.

Significance:

Most communities have people who would be willing to contribute their time in assisting the high school in the educational process. A growing population of senior citizens and others with particular talents can make a major contribution to the school if properly utilized.

Findings:

More than one-fourth of the responding high schools (29.5 percent) said that they had an adult volunteer program in general use, and another third (35.0 percent) said that such a program had been partially implemented.

Large schools (35.2 percent) and city schools (34.3 percent) tended to report more use of volunteers than small, rural, or small town schools.

An example of an active adult volunteer program is Eaglecrest High School in Aurora, Colorado, which employed some 600 volunteers during the past year to assist with tutoring, to help students with research and writing, and to perform other tasks.

Summary of findings regarding Adult Volunteer Program:

In general use — 30 percent
Partially implemented — 35 percent
Planned for next year — 6 percent
Not planned for next year — 29 percent

Community Service

Definition:

Students are or will be required to perform a specific number of hours of community service in order to graduate.

Significance:

Some teenage youth feel unconnected to the real world in many respects during their high school years, and thus may develop very little sense of responsibility for others in their community. In an effort to engender a sense of civic responsibility and more intimate knowledge of the community's human needs, some schools are providing programs that require students to volunteer their time with the elderly, day care centers, and other social agencies.

Findings:

About one-fourth of the responding schools had a mandatory student community service program either fully (12.6 percent) or partially (13.3 percent) implemented at the time of the survey; another 10.2 percent planned to implement such a program the next year. However, 63 percent of the schools said they did not plan to implement a student community service program in the coming year.

The proportion of schools requiring students to perform community service was much larger among private schools, with fully half of the responding private schools (50.8 percent) having such programs in general use and another 17.0 percent having them partially implemented.

In Maryland, where a state requirement for community service has been enacted, 42 percent of the responding schools reported a community service plan to be in general use and another 33 percent said they planned to implement the practice the next year. (See Table 9, page 56.)

Summary of findings regarding Community Service:

In general use — 13 percent
Partially implemented — 13 percent
Planned for next year — 10 percent
Not planned for next year — 63 percent

Summary of Findings for *Community Outreach*

The survey asked respondents about six different approaches to strengthening the ties between the school and the larger community. The results indicate that most schools are letting their facilities be used for community purposes before and after school, with public schools much more likely than private schools to make such use of their resources. A large proportion of schools (about half) provide *allied youth services*, working with social service agencies to meet the needs of their students.

Smaller proportions of the responding schools are engaged in partnerships with either institutions of higher education or the business community. *Business/industry alliances* are more common in public schools than in private schools, and are used more in large, city schools than in smaller schools in other types of communities. *Adult volunteer programs* are also more common in large, city schools, and are reported to be in general use in over one-fourth of the responding high schools.

About 1 in 8 of the respondents say they have a requirement for student *community service*, and an equal number say they plan to implement such a requirement during the coming year. Community service requirements for students are much more common in private schools than in public schools.

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Figure 4. – Percentage of High Schools Reporting *Community Outreach* Elements of Restructuring "In General Use" or "Partially Implemented"

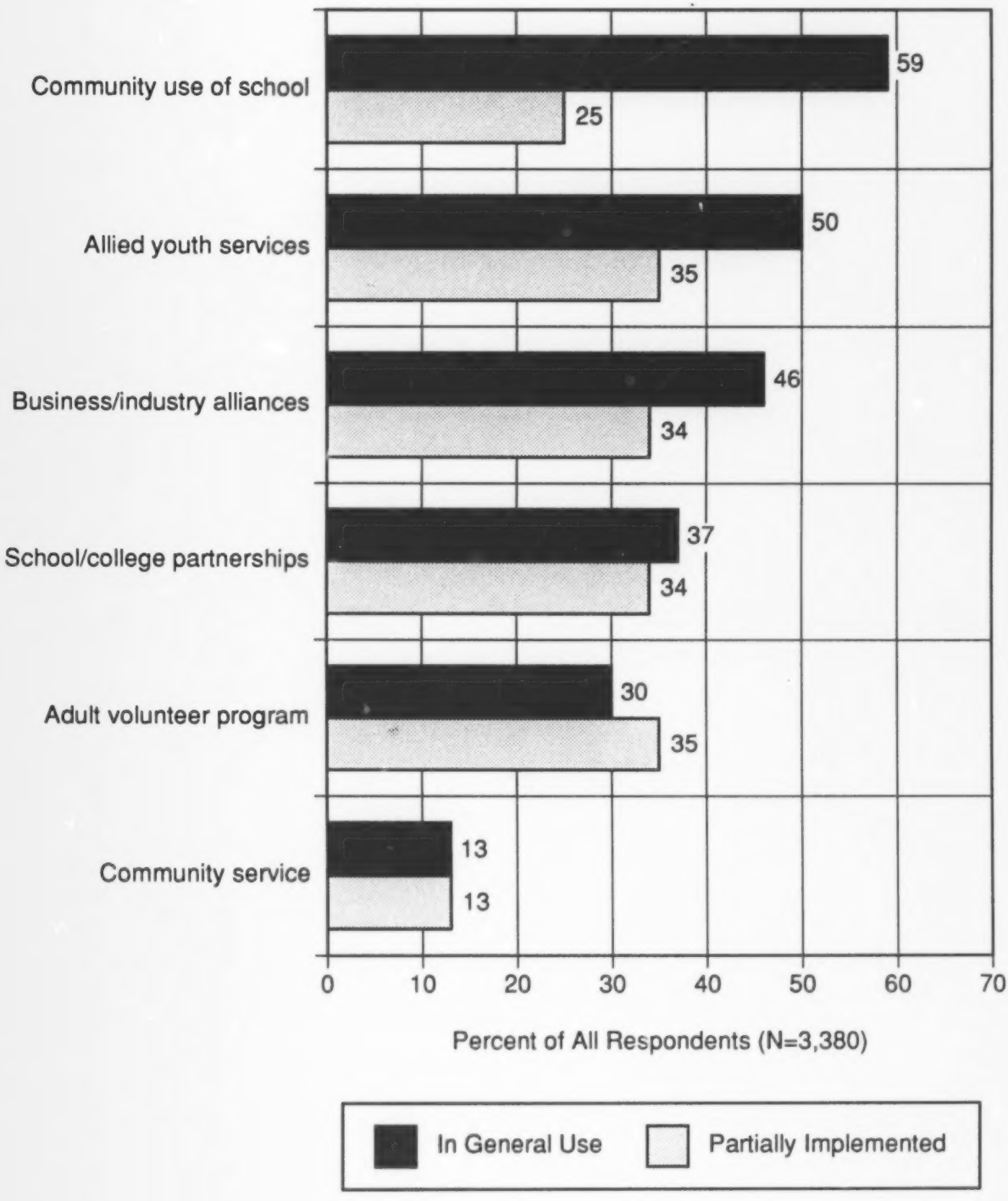

Table 3.—Percentage of High Schools Reporting Implementation of *Community Outreach* Elements, by Type of Support, Enrollment, and Type of Community

	ALL RESPONDENTS	SCHOOL TYPE: PUBLIC	SCHOOL TYPE: PRIVATE	PUBLIC SCHOOLS ONLY — ENROLLMENT: LESS THAN 500	ENROLLMENT: 500 TO 999	ENROLLMENT: 1,000 OR MORE	COMMUNITY TYPE: CITY	COMMUNITY TYPE: SUBURB	COMMUNITY TYPE: SMALL TOWN	COMMUNITY TYPE: RURAL
COMMUNITY USE OF SCHOOL:										
IN GENERAL USE	59.1	62.7	29.6	62.5	64.6	61.3	59.6	67.3	64.5	61.0
PARTIALLY IMPLEMENTED	24.6	23.6	32.7	25.9	22.3	23.5	23.2	20.9	25.5	25.8
PLANNED FOR NEXT YEAR	1.0	1.1	0.6	1.1	1.1	1.1	1.5	1.0	0.4	1.2
NOT PLANNED FOR NEXT YEAR	14.9	12.3	35.5	10.5	11.4	13.8	15.3	10.5	9.2	12.0
NO RESPONSE	0.4	0.3	1.7	. . .	0.5	0.3	0.4	0.4	0.4	. . .
ALLIED YOUTH SERVICES:										
IN GENERAL USE	49.9	51.4	38.3	49.6	53.8	50.7	53.2	49.7	52.8	48.9
PARTIALLY IMPLEMENTED	34.9	34.3	39.1	35.7	32.8	34.5	34.2	33.7	33.7	35.7
PLANNED FOR NEXT YEAR	2.0	2.2	0.6	1.5	2.1	2.7	2.7	2.1	1.9	1.5
NOT PLANNED FOR NEXT YEAR	12.6	11.6	21.2	12.9	10.8	11.4	9.1	14.0	10.9	13.5
NO RESPONSE	0.6	0.6	0.8	0.3	0.6	0.7	0.8	0.5	0.6	0.3
BUSINESS/INDUSTRY ALLIANCES:										
IN GENERAL USE	45.5	48.2	23.7	36.8	47.7	55.3	57.4	47.6	40.4	38.5
PARTIALLY IMPLEMENTED	33.7	34.1	29.9	37.5	34.3	31.9	30.7	33.1	39.2	37.8
PLANNED FOR NEXT YEAR	3.8	3.7	4.2	4.1	3.5	3.8	3.7	3.4	3.5	4.1
NOT PLANNED FOR NEXT YEAR	16.5	13.5	41.1	21.1	14.2	8.5	7.7	15.5	16.6	19.0
NO RESPONSE	0.5	0.5	1.1	0.5	0.3	0.5	0.5	0.4	0.4	0.7
SCHOOL/COLLEGE PARTNERSHIPS:										
IN GENERAL USE	36.7	37.1	33.8	30.5	37.0	40.8	41.6	36.5	31.2	34.7
PARTIALLY IMPLEMENTED	33.8	33.7	35.5	32.8	32.9	34.7	34.5	32.5	35.1	32.3
PLANNED FOR NEXT YEAR	3.0	2.8	5.3	3.4	2.7	2.4	2.8	2.6	3.7	2.2
NOT PLANNED FOR NEXT YEAR	25.9	26.0	25.1	33.1	26.8	21.5	20.5	27.7	29.6	30.4
NO RESPONSE	0.5	0.5	0.3	0.1	0.6	0.6	0.5	0.7	0.4	0.3
ADULT VOLUNTEER PROGRAM:										
IN GENERAL USE	29.5	28.9	34.4	21.9	26.2	35.2	34.3	29.4	23.0	23.2
PARTIALLY IMPLEMENTED	35.0	35.3	32.4	33.9	36.9	34.5	34.3	36.6	33.7	36.6
PLANNED FOR NEXT YEAR	6.0	6.3	2.5	7.8	6.2	5.8	6.2	5.5	6.0	7.9
NOT PLANNED FOR NEXT YEAR	28.7	28.6	29.9	36.1	29.7	23.6	24.6	27.5	36.3	32.0
NO RESPONSE	0.8	0.8	0.8	0.3	1.0	0.9	0.7	1.0	1.0	0.3
COMMUNITY SERVICE:										
IN GENERAL USE	12.6	8.0	50.8	5.7	7.8	9.5	8.3	10.6	6.4	5.0
PARTIALLY IMPLEMENTED	13.3	12.8	17.0	9.4	11.5	15.8	15.9	13.6	9.4	9.1
PLANNED FOR NEXT YEAR	10.2	10.2	9.2	7.6	8.8	12.7	11.1	11.7	8.6	7.4
NOT PLANNED FOR NEXT YEAR	63.0	68.1	22.3	76.8	70.9	60.8	63.9	62.9	74.9	77.8
NO RESPONSE	0.9	0.9	0.6	0.4	1.0	1.2	0.8	1.2	0.8	0.9
TOTAL IN COLUMN	3,380	3,009	358	734	967	1,275	1,071	819	513	585

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Restructuring Technology

The promises of technology for increasing the power and efficiency of education are enormous. But for a number of reasons, schools have tended to lag behind commercial and industrial institutions in utilizing the potential and power of technology to actively engage students in the learning process in order to enhance or increase productivity.

Because electronic-based technology is still very much an "innovation" in many high schools, the use of such technology faces all the problems of major change encountered with other elements of restructuring. Even when the opportunity for using technology has been provided, many teachers are slow to incorporate it into their instructional strategy. The need for on-site training of teachers is great, and plans must be made for helping monitor and select effective programs from a vast array of software that is available. The initial financial investment required serves as a deterrent in many districts, and more policy attention is required to create ways of financing technology and providing incentives for extending its use.

Despite these barriers, electronic technology is demonstrating more and more potential for improving student achievement, deepening student understanding of important concepts among the disciplines, and more actively engaging students in the learning process. The presence of computers in a school in sufficient quantity to ensure access is an important first step, and the acquisition of computers is steadily growing. According to a study by Quality Education Data (1993), 19 percent of the nation's schools reported a microdensity of one computer for every nine students or more, which meets QED's standard of availability.[3]

A discussion of the specific restructuring elements included in the *technology* component follows. The elements chosen for inclusion in this study represent the major applications that are available now for installation in the high schools. They are:

- video instructional materials,
- word processing applications,
- CD ROM technology,
- computer literacy,
- modems,
- multimedia systems,
- distance learning, and
- Integrated Learning System.

The national findings on the use of eight different types of instructional technology are reported in Figure 5 (page 41). Table 4 on page 42 shows these findings by school support type, enrollment size, and community type.

Video Instructional Materials

Definition:

One or more of the school departments regularly employs commercial videotape or video-

disc materials as an instructional tool to supplement textbooks.

Significance:

Today's youth are accustomed to the power of television, and much of their education often comes from outside the classroom. The extensive array of software on all topics makes the task of selection a difficult one, but clearly this technology has replaced film because of its versatility and cost. In addition, many teachers are beginning to help students design their own video productions in addition to more traditional student-written reports.

Findings:

A large majority of the responding schools (63.9 percent) have implemented general use of video instructional materials, and an additional 26.9 percent have partially implemented such use. These data reveal widespread use of video instructional materials in the nation's high schools.

Suburban schools were somewhat more likely (67.6 percent) than city schools (59.0 percent) to have video instructional materials in general use. Private schools (70.7 percent) reported more use of this element than did public schools (63.2 percent).

Summary of findings regarding Video Instructional Materials:

In general use — 64 percent
Partially implemented — 27 percent
Planned for next year — 3 percent
Not planned for next year — 6 percent

Word Processing Applications

Definition:

Students are routinely provided with opportunities to use computers for practicing composition and editing skills using word processing programs.

Significance:

The computer has replaced the typewriter in the world of work. Advances in technology are bringing along voice recognition systems that will further alter office routines. The computer's ability to encourage students to draft, edit, and revise their work makes it an invaluable tool for teaching writing. Many high schools accomplish this application by providing writing labs or other computer installations for their students.

Findings:

This element was in general use in the majority of the schools (60.4 percent) and in partial use in another third of the schools (30.7 percent). Small schools (68.0 percent) were more likely to make general use of word processing applications than were large schools (55.8 percent). City schools (54.0 percent) were less likely to report this element than were their counterparts in suburban (63.2 percent), small-town (64.1 percent), and rural (64.6 percent) communities.

Summary of findings regarding Word Processing Applications:

In general use — 60 percent
Partially implemented — 31 percent
Planned for next year — 4 percent
Not planned for next year — 5 percent

CD ROM Technology

Definition:

Students make routine *in-school* use of CD ROM technology (encyclopedias or other data bases) for retrieving information.

Significance:

The CD ROM drive has rapidly emerged as a powerful technology for storing huge amounts of

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print and video information that can be retrieved, sorted, and displayed in a variety of ways using navigation tools designed to make searching easier for the novice user.

Findings:

CD ROM technology was in general use in almost half of the responding schools (43.6 percent), and in partial use in another 29.7 percent. The 12.3 percent of the schools reporting plans to install CD ROM next year suggests that this is a growing application of technology.

CD ROM technology was more common in public schools (44.5 percent) than in private schools (36.6 percent), and was used in more suburban schools (50.8 percent) than city schools (41.0 percent). There was little variation by school enrollment size.

Summary of findings regarding CD ROM Technology:

In general use — 44 percent
Partially implemented — 30 percent
Planned for next year — 12 percent
Not planned for next year — 14 percent

Computer Literacy

Definition:

Students are required to demonstrate at least basic proficiency in use of a microcomputer and with a word processing program in order to graduate.

Significance:

As seen in the curriculum restructuring data, large numbers of high schools are involved in setting specific performance standards for graduation including such areas as writing, mathematics, or other skills. Because computer literacy is essential to the future lives of students, one might anticipate more standards to be established in this area in the future.

Findings:

Less than half of the responding schools (40.9 percent) had implemented a general requirement for computer literacy for their graduates; another fifth (21.7 percent) had partially implemented such a requirement. These findings suggest that, while most students no doubt have access to computers in their schools, many schools do not currently require computer skills for graduation.

Computer literacy requirements were more common in smaller schools (47.0 percent) and rural schools (47.4 percent) than in large schools (33.2 percent) or city schools (31.8 percent). Private schools (55.9 percent) were more likely than public schools (39.0 percent) to have implemented such requirements.

Summary of findings regarding Computer Literacy:

In general use — 41 percent
Partially implemented — 22 percent
Planned for next year — 5 percent
Not planned for next year — 32 percent

Modems

Definition:

Using modems, students routinely access information from a variety of data banks and other sources *outside the school.*

Significance:

This technology affords students the opportunity to retrieve information from a variety of sources, and enables them to learn how to search and evaluate huge amounts of information. The modem can also enable teachers and students to

communicate and share information with their counterparts in other schools.

Findings:

About one-fourth of the responding schools (22.7 percent) said that access to modems was in general use for their students. A larger proportion (35.2 percent) had partially implemented this element, and a relatively large proportion (13.5 percent) planned to implement it next year.

Among community types, suburban schools (28.0 percent) were the most likely to have modems in general use.

Summary of findings regarding Modems:

In general use — 23 percent
Partially implemented — 35 percent
Planned for next year — 14 percent
Not planned for next year — 28 percent

Multimedia Systems

Definition:

The school has one or more systems that allow teachers and students to combine text, data, audio, graphic, animation, and/or still or moving video into a computer-controlled interactive product.

Significance:

Both students and teachers gain experience in analyzing a variety of forms of information and organizing it for their own purposes by using multimedia systems. Such systems are useful to teachers for presenting information, and to students for developing reports in a versatile format. Limited use of this technology is beginning to be made for preparing portfolios of student work that will be required for demonstrating attainment of performance standards for graduation.

Findings:

Only about 1 in 5 of the schools (20.3 percent) reported general use of multimedia systems. However, this element is growing, as indicated by the 28.7 percent who reported partial use and the 12.0 percent who said they planned the use of multimedia systems for the next year.

The analysis by enrollment size shows that large schools (25.8 percent) were more likely to use multimedia systems than were smaller schools (14.7 percent). Public schools reported greater use of this element (21.2 percent) than did private schools (12.0 percent).

Summary of findings regarding Multimedia Systems:

In general use — 20 percent
In partially use — 29 percent
Planned for next year — 12 percent
Not planned for next year — 38 percent

Distance Learning

Definition:

The school is regularly involved in interactive transmission of televised instruction from a distant location via satellite or cable systems for course credit or general delivery of information.

Significance:

This application provides students with learning opportunities for courses not taught in the local school through services provided by several universities and other agencies.

Findings:

About 1 in 5 of the schools (18.6 percent) had distance learning in general use, and another fifth (19.2 percent) had partially implemented this element. An additional 11.3 percent planned to implement distance learning the following year.

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As might be expected, distance learning was more common in rural schools (25.6 percent) than in city schools (15.4 percent).

Summary of findings regarding Distance Learning:
In general use — 19 percent
Partially implemented — 19 percent
Planned for next year — 11 percent
Not planned for next year — 50 percent

Integrated Learning System

Definition:

Regular instructional use is made of a comprehensive software system (ILS) which usually operates out of a local area network in a lab or the classroom; the ILS offers instructional activities and includes a management system that monitors student performance.

Significance:

These systems are designed by a limited number of large companies to support regular classroom instruction through regular visits to a lab. Although the early systems were more common for elementary instruction, applications for high schools are increasingly available.

Findings:

Integrated Learning Systems were in general use in 14.4 percent of the responding schools; an additional 20.5 percent had partially implemented such systems. Integrated Learning Systems were much more common in public schools (15.4 percent) than in private schools (5.9 percent).

Summary of findings regarding Integrated Learning Systems:
In general use — 14 percent
Partially implemented — 21 percent
Planned for next year — 8 percent
Not planned for next year — 56 percent

Summary of Findings for *Technology*

The survey results reveal large differences in the extent of use of the various elements of technology. The use of *video instructional materials* and *word processing* applications appears to be widespread among responding high schools, while other technologies such as use of *modems, multimedia systems, distance learning*, and *Integrated Learning Systems* are much less common.

As with other kinds of change, the results here reveal that the simpler, less expensive applications are in fairly wide use in high schools, but the more sophisticated forms of technology are being adopted at a much slower pace. The use of computers for instructional management has become increasingly common, but multimedia systems require several additional kinds of hardware and software before teachers and students can utilize such programs.

Responses to the survey indicated that many schools had created technology-rich environments. This made it difficult to describe examples of schools using the separate technology elements in the study, because schools often incorporated many of the technology elements in a comprehensive, integrated program.

A few high schools have been pacesetters for the nation in their early application of technology as an integral part of instruction. Huntsville High School in Huntsville, Alabama, houses a full-time technology team that provides on-site training and coordinates an extensive system of local area networks among departments and the library. Other leaders have been the high schools in Alhambra, California; Corona-Norco Unified School District in Corona, California; Wareham High School in Wareham, Massachusetts; and Penn High School in Osceola, Indiana.

Figure 5. – Percentage of High Schools Reporting *Technology* Elements of Restructuring "In General Use" or "Partially Implemented"

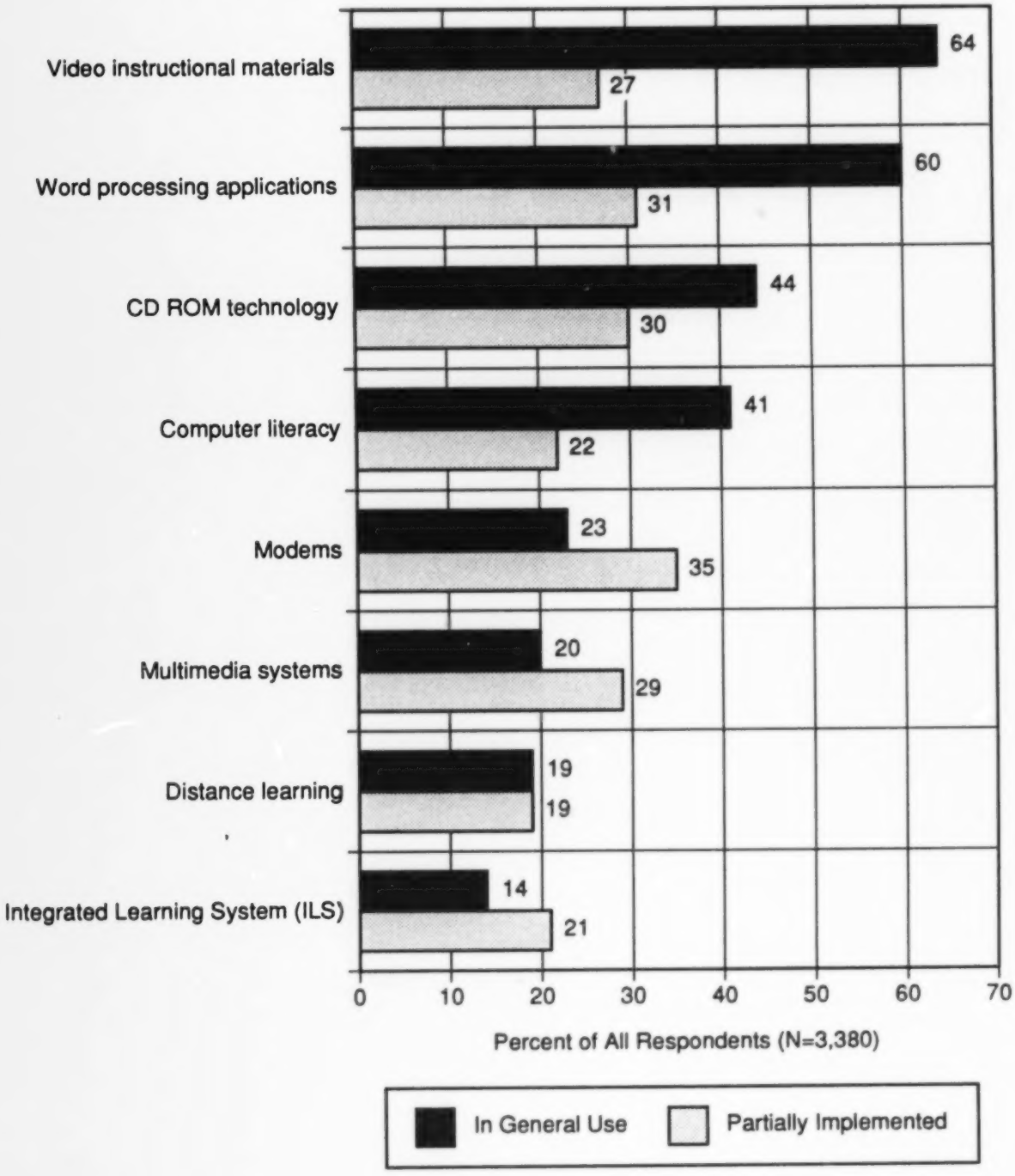

Table 4.—Percentage of High Schools Reporting Implementation of *Technology* Elements, by Type of Support, Enrollment, and Type of Community

	ALL RESPONDENTS	SCHOOL TYPE: PUBLIC	SCHOOL TYPE: PRIVATE	PUBLIC SCHOOLS ONLY — ENROLLMENT: LESS THAN 500	ENROLLMENT: 500 TO 999	ENROLLMENT: 1,000 OR MORE	COMMUNITY TYPE: CITY	COMMUNITY TYPE: SUBURB	COMMUNITY TYPE: SMALL TOWN	COMMUNITY TYPE: RURAL
VIDEO INSTRUCTIONAL MATERIALS:										
IN GENERAL USE	63.9	63.2	70.7	65.5	63.7	61.7	59.0	67.6	63.5	64.8
PARTIALLY IMPLEMENTED	26.9	27.3	23.5	24.3	27.0	29.0	30.3	24.2	28.1	24.6
PLANNED FOR NEXT YEAR	2.6	2.8	0.8	3.4	2.7	2.4	3.0	1.6	3.9	2.9
NOT PLANNED FOR NEXT YEAR	6.2	6.3	4.7	6.8	5.9	6.4	6.9	6.1	4.1	7.7
NO RESPONSE	0.4	0.5	0.3	. . .	0.7	0.5	0.7	0.5	0.4	. . .
WORD PROCESSING APLICATIONS:										
IN GENERAL USE	60.4	60.3	60.6	68.0	60.5	55.8	54.0	63.2	64.1	64.6
PARTIALLY IMPLEMENTED	30.7	30.6	31.6	25.5	29.2	34.5	34.5	29.5	28.3	27.0
PLANNED FOR NEXT YEAR	3.8	3.7	4.2	3.5	3.8	3.8	4.4	3.7	2.7	3.4
NOT PLANNED FOR NEXT YEAR	4.5	4.6	3.6	2.9	5.5	5.0	5.9	3.1	4.3	4.6
NO RESPONSE	0.7	0.7	. . .	0.1	1.0	0.8	1.2	0.5	0.6	0.3
CD-ROM TECHNOLOGY:										
IN GENERAL USE	43.6	44.5	36.6	43.5	45.5	44.9	41.0	50.8	42.5	43.8
PARTIALLY IMPLEMENTED	29.7	30.5	22.1	27.5	29.4	33.0	34.0	28.6	32.4	26.0
PLANNED FOR NEXT YEAR	12.3	11.7	16.8	15.0	11.9	9.6	10.7	9.9	13.1	14.7
NOT PLANNED FOR NEXT YEAR	13.8	12.6	24.0	14.0	12.6	11.6	13.4	10.0	11.7	15.4
NO RESPONSE	0.6	0.6	0.6	. . .	0.6	0.9	0.8	0.7	0.4	0.2
COMPUTER LITERACY:										
IN GENERAL USE	40.9	39.0	55.9	47.0	41.0	33.2	31.8	39.9	42.5	47.4
PARTIALLY IMPLEMENTED	21.7	21.2	25.7	20.7	20.9	21.3	22.5	20.1	21.2	20.7
PLANNED FOR NEXT YEAR	5.1	5.0	5.6	5.4	4.9	5.0	5.2	4.4	6.0	4.8
NOT PLANNED FOR NEXT YEAR	31.6	34.0	12.3	26.6	32.7	39.5	39.2	35.0	29.4	27.2
NO RESPONSE	0.7	0.7	0.6	0.3	0.6	1.0	1.2	0.5	0.8	. . .
MODEMS:										
IN GENERAL USE	22.7	23.3	17.3	20.2	24.3	24.5	22.0	28.0	19.1	22.7
PARTIALLY IMPLEMENTED	35.2	36.6	23.2	35.1	36.0	37.6	35.7	38.1	36.3	36.6
PLANNED FOR NEXT YEAR	13.5	13.1	16.2	15.1	12.6	12.3	12.7	12.5	15.8	12.3
NOT PLANNED FOR NEXT YEAR	28.1	26.4	43.0	29.6	26.5	24.6	28.6	20.8	28.5	28.4
NO RESPONSE	0.6	0.7	0.3	. . .	0.6	1.0	1.0	0.7	0.4	. . .
MULTIMEDIA SYSTEMS:										
IN GENERAL USE	20.3	21.2	12.0	14.7	20.4	25.8	22.1	25.6	15.6	18.3
PARTIALLY IMPLEMENTED	28.7	29.8	19.6	27.8	30.9	30.0	29.5	30.6	29.4	30.1
PLANNED FOR NEXT YEAR	12.0	12.4	8.9	14.0	11.2	12.2	12.2	12.2	13.3	12.1
NOT PLANNED FOR NEXT YEAR	38.3	35.9	59.2	43.3	36.7	31.1	35.1	30.8	41.1	39.5
NO RESPONSE	0.7	0.7	0.3	0.1	0.8	0.8	1.0	0.7	0.6	. . .
DISTANCE LEARNING:										
IN GENERAL USE	18.6	18.9	15.4	21.4	19.8	16.9	15.4	19.0	18.5	25.6
PARTIALLY IMPLEMENTED	19.2	20.0	12.8	19.1	19.6	20.9	21.5	16.6	20.9	21.0
PLANNED FOR NEXT YEAR	11.3	12.1	4.2	15.1	12.4	10.0	11.4	10.5	15.8	12.5
NOT PLANNED FOR NEXT YEAR	50.4	48.5	67.3	43.9	47.9	51.6	51.0	53.5	44.2	40.3
NO RESPONSE	0.5	0.6	0.3	0.5	0.3	0.6	0.7	0.4	0.6	0.5
INTEGRATED LEARNING SYSTEM:										
IN GENERAL USE	14.4	15.4	5.9	13.1	14.6	17.6	14.4	17.2	12.5	17.1
PARTIALLY IMPLEMENTED	20.5	21.0	15.9	18.9	21.5	21.9	22.1	21.6	20.1	19.0
PLANNED FOR NEXT YEAR	7.7	7.8	6.4	8.9	7.3	7.5	7.7	7.9	7.8	7.7
NOT PLANNED FOR NEXT YEAR	56.4	54.7	71.2	58.4	55.2	52.1	54.3	52.4	58.5	55.6
NO RESPONSE	1.0	1.1	0.6	0.7	1.3	1.0	1.4	0.9	1.2	0.7
TOTAL IN COLUMN	3,380	3,009	358	734	967	1,275	1,071	819	513	585

Restructuring Monetary Incentives

There is a great deal of literature on factors that seem to motivate employees to work harder and produce more. Some people say that "money doesn't motivate," while others believe that employees who work harder or perform better should be paid more than those who just do a day's work for a day's pay.

The incentive issue is important because, if done effectively, school restructuring places heavy demands on the time of both teachers and administrators. Schools that engage in extensive restructuring find that extra time is needed for team meetings, staff development, and other activities than can result in "burnout" and diminished enthusiasm for the changes underway.

Part of the solution to this problem may lie in restructuring the school day to provide extra time through such means as the block schedule and common planning periods for teams. But beyond this, some schools seek ways to provide the incentives necessary to make it worth the extra effort required for restructuring.

At the state level, a common pattern now emerging in states like Kentucky is to give financial rewards or penalties to schools based on improved student performance. It is too early to tell whether this will be an effective incentive or will simply result in teaching for the tests, keeping certain students out of the testing population, or other means of "beating the system." Such negative outcomes would be entirely predictable according to advocates of Total Quality Management. Nonetheless, this pattern of including financial rewards and penalties in school reform at the state level appears likely to continue.

While this study only examined use of monetary incentives, it seems that, as teachers in a restructured high school play new roles, the work of teaching itself may become more rewarding than in a traditional setting.

The study sought to determine the extent to which high schools are employing four forms of monetary incentives as part of restructuring:

- career ladder plans,
- administrator incentive pay,
- teacher incentive pay, and
- group incentive pay.

The results for the *monetary incentives* component are summarized in graphic form in Figure 6 on page 47. Table 5 on page 48 shows the results by school support type, enrollment size, and community type.

Career Ladder Plan

Definition:

The salary schedule for teachers includes provisions for extra pay for additional responsibilities for staff supervision, curriculum development, or related activities.

Significance:

This plan emerged a few years ago as a way to reward new roles that were emerging for teachers and to accelerate the time it takes to move up the salary schedule. It is intended to encourage teachers to assume more responsibility for improvement and take on new roles to help increase student performance.

Findings:

About 2 in 5 of the reporting high schools had some kind of career ladder, either in general use (24.8 percent) or partially implemented (15.4 percent). These findings indicate that a significant number of high schools currently have some aspects of this idea in their compensation plan. However, less than 1 percent reported that they planned to adopt this change next year.

Private schools were more likely to have career ladder plans in place (31.0 percent) than were public schools (24.1 percent). There were no significant differences by school size or community type.

Summary of findings regarding Career Ladder Plan:

In general use — 25 percent
Partially implemented — 15 percent
Planned for next year — 1 percent
Not planned for next year — 58 percent

Administrator Incentive Pay

Definition:

Incentive pay program for building administrators (salary increments or bonuses for outstanding performance) exists.

Significance:

Advocates believe incentive pay plans would motivate administrators to work harder toward improving their school and incorporating interventions to improve student achievement.

Findings:

Incentive pay plans for administrators were reported to be in general use by a small number of schools (6.4 percent), and fewer still (4.2 percent) were planning such a change for next year .

Small schools were less likely to report such plans (3.8 percent) than were medium-sized schools (7.4 percent) or large schools (7.7 percent).

Summary of findings regarding Administrator Incentive Pay:

In general use — 6 percent
Partially implemented — 4 percent
Planned for next year — 1 percent
Not planned for next year — 88 percent

Teacher Incentive Pay

Definition:

Incentive pay program for teachers (salary increments or bonuses for outstanding performance) exists.

Significance:

Advocates believe that monetary incentives will motivate teachers to work harder and seek other ways to improve student performance.

Findings:

Only a small percentage of high schools, 5.8 percent, reported teacher incentive pay plans to be in general use, and about the same percentage had partially implemented such plans (4.3 percent).

As with administrator incentive pay plans, small schools (3.5 percent) were less likely than large schools (7.3 percent) to use teacher incentive pay plans.

Summary of findings regarding Teacher Incentive Pay:

In general use — 6 percent
Partially implemented — 4 percent
Planned for next year — 1 percent
Not planned for next year — 89 percent

Group Incentive Pay

Definition:

A *group* of teachers may earn incentive pay for a joint project found to have significantly contributed to goals or outcomes designated as important to the school.

Significance:

Group incentive plans tend to avoid the divisiveness of individual merit pay plans. The idea attempts to ensure that all teachers in the group contribute to common goals. Under a group incentive plan, for example, all teachers in a science department would receive a bonus if they demonstrate that specific improvement goals have been accomplished. Such plans may hold promise for helping teachers to work collaboratively.

Findings:

With only 2.5 percent of responding school districts reporting general use of group incentive pay plans, such plans were the least common form of incentive pay in the survey. More than nine in 10 respondents (92.5 percent) said that they had no plans to implement group incentive pay during the coming year.

Examples of group incentive plans exist in Midwood High School, Providence Senior High School, and Independence Senior High School in the Charlotte-Mecklenburg School System in North Carolina. These schools participate in a voluntary district plan in which teachers receive a $750 to $1,000 bonus for meeting or exceeding such benchmark goals as increasing student performance on science, social studies, reading, writing, or mathematics tests. Other long-term goals include decreasing the dropout rate, increasing enrollment in higher-level courses, and decreasing absenteeism. A similar plan for rewarding the performance of teacher groups is underway in the Glendale Union High School District in Glendale, Arizona.

Summary of findings regarding Group Incentive Pay:

In general use — 3 percent
Partially implemented — 4 percent
Planned for next year — 1 percent
Not planned for next year — 93 percent

Summary of Findings for *Monetary Incentives*

About 2 in 5 of the high schools reported either general or partial use of some kind of *career ladder plan,* defined as featuring additional pay for teachers who assume additional responsibilities. While career ladder plans were gaining in popularity a few years ago, less than 1 percent of the high schools reported plans to adopt any kind of career ladder plan next year, suggesting that adoption of this innovation has slowed.

Individual *incentive pay plans* for either *administrators* or *teachers* were reported in general or partial use by about 1 in 10 of the responding high schools, with even smaller proportions reporting that such a change was planned for the next year.

These results tend to indicate that school boards and administrators recognize serious problems that are often encountered when some kind of merit pay is used because of the difficulty in designating those who receive merit pay in a

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fair and reliable fashion. It can be argued that it would be difficult to sustain a teaching team effort to work closely together and also maintain a merit pay plan that produces winners and losers. Also, monetary incentive plans are often eliminated or reduced during periods of severe budget cuts.

The potential divisiveness of individual incentive pay might be avoided by the use of *group incentive pay*, which is designed to encourage cooperation and teamwork among teachers. However, group incentive pay plans were reported to be in general use by very few responding schools, less than 3 percent, and in partial use by less than 4 percent. Even fewer schools, 1 percent, were planning to implement such plans in the next year.

Figure 6. – Percentage of High Schools Reporting *Monetary Incentives* Elements of Restructuring "In General Use" or "Partially Implemented"

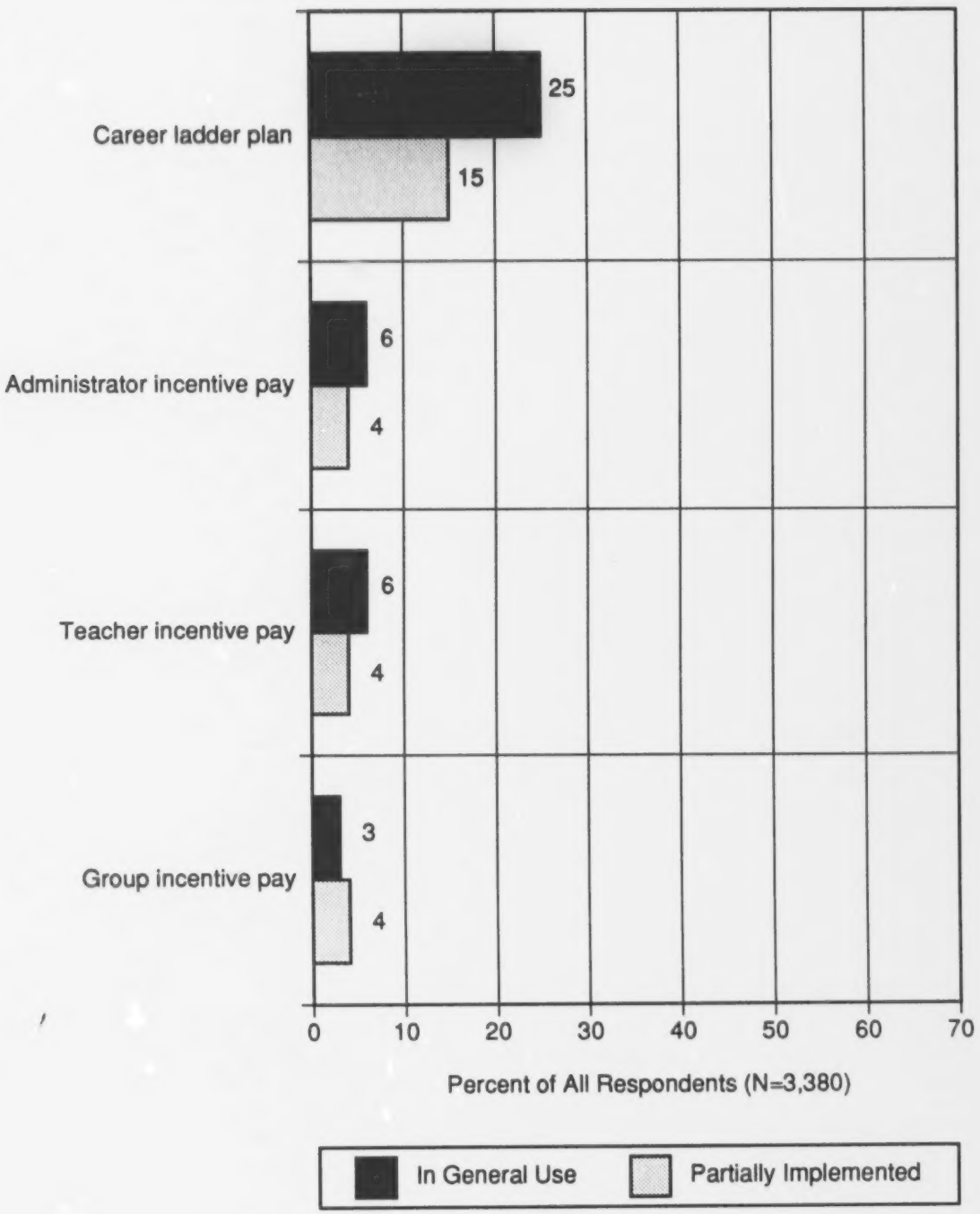

Table 5.—Percentage of High Schools Reporting Implementation of *Monetary Incentives* Elements, by Type of Support, Enrollment, and Type of Community

	ALL RESPONDENTS	SCHOOL TYPE: PUBLIC	SCHOOL TYPE: PRIVATE	PUBLIC SCHOOLS ONLY — ENROLLMENT: LESS THAN 500	ENROLLMENT: 500 TO 999	ENROLLMENT: 1,000 OR MORE	COMMUNITY TYPE: CITY	COMMUNITY TYPE: SUBURB	COMMUNITY TYPE: SMALL TOWN	COMMUNITY TYPE: RURAL
CAREER LADDER PLAN:										
IN GENERAL USE	24.8	24.1	31.0	21.9	26.2	23.9	24.7	25.9	21.4	22.4
PARTIALLY IMPLEMENTED	15.4	14.6	22.6	15.8	14.2	14.3	15.0	13.3	15.0	15.4
PLANNED FOR NEXT YEAR	0.7	0.6	1.4	0.5	0.6	0.7	0.8	0.6	0.6	0.3
NOT PLANNED FOR NEXT YEAR	58.4	60.0	44.7	61.3	58.3	60.2	58.2	59.8	62.6	61.2
NO RESPONSE	0.7	0.7	0.3	0.4	0.7	0.9	1.2	0.4	0.4	0.7
ADMINISTRATOR INCENTIVE PAY:										
IN GENERAL USE	6.4	6.6	5.0	3.8	7.4	7.7	6.6	8.8	4.7	5.3
PARTIALLY IMPLEMENTED	4.2	3.9	6.4	3.3	4.8	3.5	3.7	4.0	4.1	3.8
PLANNED FOR NEXT YEAR	1.0	1.1	0.3	0.7	1.6	1.0	1.0	1.2	0.4	1.7
NOT PLANNED FOR NEXT YEAR	87.9	87.9	88.3	92.1	85.8	87.1	87.8	85.6	90.4	89.1
NO RESPONSE	0.4	0.5	. . .	0.1	0.4	0.7	0.8	0.4	0.4	0.2
TEACHER INCENTIVE PAY:										
IN GENERAL USE	5.8	5.7	6.7	3.5	5.4	7.3	6.4	5.5	4.3	6.0
PARTIALLY IMPLEMENTED	4.3	4.0	7.3	3.8	3.6	4.2	4.5	2.4	4.5	4.6
PLANNED FOR NEXT YEAR	0.8	0.7	1.4	0.8	0.7	0.6	0.9	0.4	0.4	1.0
NOT PLANNED FOR NEXT YEAR	88.7	89.2	84.6	91.8	89.9	87.3	87.3	91.5	90.4	88.4
NO RESPONSE	0.4	0.4	. . .	. . .	0.4	0.6	0.8	0.2	0.4	. . .
GROUP INCENTIVE PAY:										
IN GENERAL USE	2.5	2.7	1.7	2.0	2.4	3.2	2.8	3.2	1.8	2.6
PARTIALLY IMPLEMENTED	3.6	3.6	3.4	4.1	3.1	3.6	3.3	3.3	4.9	3.2
PLANNED FOR NEXT YEAR	0.8	0.8	1.1	0.5	0.7	1.0	1.0	0.6	0.4	0.9
NOT PLANNED FOR NEXT YEAR	92.5	92.3	93.6	93.1	93.5	91.1	91.8	92.4	92.2	93.3
NO RESPONSE	0.6	0.7	0.3	0.3	0.3	1.0	1.1	0.5	0.8	. . .
TOTAL IN COLUMN	3,380	3,009	358	734	967	1,275	1,071	819	513	585

Variations in Rates of Implementation of the Five Major Components of Restructuring

The analysis of data collected for this survey allows some interesting comparisons of the five major components of restructuring.

Table 6 on page 50 reports, for each of the five broad components of restructuring, the average number of restructuring elements that schools reported to be "in general use" according to type of support (public/private), enrollment size, and type of community served.

Curriculum/Teaching

Under the *curriculum/teaching* component, the average number of elements in general use was 2.4, or 30 percent of the possible total of 8 elements.

In general, large high schools tended to report more use of the *curriculum/teaching* restructuring elements (an average of 2.7) than did small schools (2.2). Suburban schools tended to have higher rates of adoption of curriculum elements (an average of 2.7) than did city schools (2.5), small town schools (2.2), or rural schools (2.4).

Public and private schools were similar in their overall rates of adoption of *curriculum/teaching* elements. However, when we look at the specific elements under this component (see Table 1 on page 17), we can see that private schools reported higher rates of adoption of outcome based education, the national mathematics standards, thinking skills, and alternative assessment techniques, while public schools reported greater use of school-to-work transition programs, staff development programs, and cooperative learning.

School Organization

Under the *school organization* component, the average number of elements in general use was 1.8, or just 18 percent of the 10 elements. A higher average number of elements was reported by private schools (2.5) than public schools (1.7 percent).

There were no significant differences in the overall use of the school organization elements by school size or by community type. However, Table 2 on page 28 shows some interesting differences when we look at the various elements of this component separately. For example, shared school governance was implemented more often in larger, city schools than in their smaller, rural counterparts. Divisional organization, on the other hand, was reported twice as often by rural schools as by city schools.

Community Outreach

The average number of *community outreach* elements in general use was 2.3 out of 6, or 38

Table 6.—Average Number of Restructuring Elements "In General Use" for Each Restructuring Component, by Support, Enrollment, and Type of Community

	ALL RESPONDENTS	SCHOOL TYPE: PUBLIC	SCHOOL TYPE: PRIVATE	PUBLIC SCHOOLS ONLY — ENROLLMENT: LESS THAN 500	ENROLLMENT: 500 TO 999	ENROLLMENT: 1,000 OR MORE	COMMUNITY TYPE: CITY	COMMUNITY TYPE: SUBURB	COMMUNITY TYPE: SMALL TOWN	COMMUNITY TYPE: RURAL
CURRICULUM/TEACHING (MAXIMUM POSSIBLE = 8)										
MEAN	2.4	2.5	2.3	2.2	2.4	2.7	2.5	2.7	2.2	2.4
RANGE--LOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HIGH	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
SCHOOL ORGANIZATION (MAXIMUM POSSIBLE = 10)										
MEAN	1.8	1.7	2.5	1.7	1.6	1.7	1.7	1.6	1.6	1.7
RANGE--LOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HIGH	9.0	9.0	9.0	9.0	8.0	8.0	8.0	8.0	9.0	8.0
COMMUNITY OUTREACH (MAXIMUM POSSIBLE = 6)										
MEAN	2.3	2.3	2.1	2.0	2.3	2.5	2.5	2.4	2.1	2.1
RANGE--LOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HIGH	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
TECHNOLOGY (MAXIMUM POSSIBLE = 8)										
MEAN	2.8	2.8	2.7	2.9	2.9	2.8	2.6	3.1	2.7	3.0
RANGE--LOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HIGH	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
MONETARY INCENTIVES (MAXIMUM POSSIBLE = 4)										
MEAN	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.3
RANGE--LOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HIGH	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0
NBR	3,380	3,009	358	734	967	1,275	1,071	819	513	585

percent of the total. Slightly higher average numbers of community outreach elements were reported by larger high schools (2.5) and city schools (2.5). Private schools, with an average of 2.1, reported slightly fewer community outreach elements than did public schools.

Looking at the individual elements (Table 3 on page 35), public high schools were more likely to be serving as community schools, providing allied youth services, and engaging in business/industry alliances than were private schools. Private schools were much more likely to require their students to perform community service, with over half of the responding private schools indicating general use of this element compared to only 8 percent of public schools.

They were also more likely to report the existence of comprehensive adult volunteer programs.

Larger, urban schools tended to be less likely to serve as community schools than were schools in other types of communities.

Technology

The average number of *technology* elements reported for all schools was 2.8, or 35 percent of the possible 8. Suburban high schools reported an average of 3.1 *technology* elements, perhaps reflecting more favorable financial support. Public schools reported a higher rate of technology use on 5 of 8 elements, but private schools were more likely to require computer proficiency for graduation and to make regular use of video materials. (See Table 4, page 42.)

Monetary Incentives

The average number of elements reported in the area of *monetary incentives* was 0.4 out of a possible 4, or 10 percent. This low level of implementation was consistent among public and private schools and for schools of all sizes and community types.

Summary

Comparing the implementation of elements within the five major components of restructuring, these findings suggest that the schools in the study had carried out the highest level of restructuring activities in the area of *community outreach*, followed by implementation of *technology* and *curriculum/teaching*. There was a relatively low level of activity reported in the area of *school organization*, and very little activity in the area of *monetary incentives*.

Variations Among States

Factors that affect the extent to which high schools adopt restructuring elements include school district and school site leadership, social, political, and economic conditions, and whether one or more articulate leaders emerge as advocates of certain changes. One especially powerful factor is whether the state department of education advocates or the state legislature mandates particular reform measures.

Tables 7 through 11 (pages 54-58) show the variations among the states in the percentage of high schools reporting "general use" of the elements of restructuring in the survey. The states vary greatly in the proportion of schools that have implemented many of the restructuring elements. Highlights of these findings include:

- *Outcome based education* is a common pattern of reform being mandated by some states. Table 7 shows that in Alabama, Georgia, Hawaii, Louisiana, Mississippi, New Jersey, West Virginia, and the District of Columbia,* half or more of the high schools reported outcome based education to be in general use. In Idaho and Nebraska, fewer than 5 percent of responding schools had outcome based education in general use.
- *Interdisciplinary teaching* was in general use in over half the high schools in only one entity, the District of Columbia (57 percent). States in which relatively high proportions of the schools reported using interdisciplinary teaching were Hawaii (50 percent), Vermont (42 percent), Wisconsin (34 percent), Kentucky (33 percent), and Rhode Island (33 percent). The states with the lowest proportions of schools using interdisciplinary teaching were North Dakota (0 percent) and Alabama (5 percent). (See Table 7.)
- *Alternative assessment* was in highest use in Kentucky, where 67 percent of the high schools reported such changes in assessment. No other state had more than half of its schools reporting general use of this element. Alternative assessment was least commonly in use in North Dakota (0 percent) and New Hampshire (8 percent). (See Table 7.) Changes in assessment tend to accompany mandates to establish performance-based graduation requirements, and this may involve both new statewide testing and more comprehensive assessment plans being developed at the school level.
- *Site based management* was in general use in more than half of the responding schools in Texas (67 percent), Vermont (58 percent), Colorado (56 percent), Kentucky (56 percent), and Oklahoma (52 percent). Only one state, North Dakota, had fewer than 10 per-

* Readers should use caution in comparing results for the District of Columbia with those for the 50 states. Percentages for the District of Columbia are based on a total of only 7 responses, 4 of which were private schools.

cent of its high schools reporting general use of this decentralization plan. (See Table 8.)

- The *block schedule* was reported in general use by more than half of the schools in only the District of Columbia (57 percent). States in which relatively high proportions of the schools reported use of this element were Alaska (47 percent), Colorado (47 percent), Utah (42 percent), and Hawaii (40 percent). None of the responding schools in Montana, New Hampshire, North Dakota, and South Dakota reported general use of the block schedule. (See Table 8.)
- *Business/industry alliances* were reported by the largest proportions of schools in West Virginia (81 percent), Hawaii (80 percent), Georgia (70 percent), Mississippi (70 percent), and Kentucky (69 percent). Only two states had less than 33 percent of their schools reporting general use of this element — New York (32 percent) and Wyoming (28 percent). (See Table 9).
- *Community use of the school* was reported by the smallest proportions of high schools in the District of Columbia (14 percent), Arkansas (28 percent), and New Mexico (32 percent). (See Table 9.)
- There was great variation among the states in the requirement for student *community service*. In the District of Columbia, 86 percent of the schools had this element in general use. The state with the next highest percentage of schools requiring community service was Maryland (42 percent), reflecting the state mandate due to take effect in the future. Many states had very low percentages of their schools requiring community service, most notably Hawaii (0 percent) and Idaho (2 percent). (See Table 9.)
- *Modems* were reported to be in general use in the largest percentages of schools in Colorado (59 percent) and North Dakota (50 percent). The only states with fewer than 10 percent of their schools reporting general use of modems were Arkansas (4 percent), Mississippi (4 percent), and Idaho (9 percent). (See Table 10.)
- *Word processing* instructional opportunities for students were reported to be in general use in large percentages of high schools in many states. But less than half of the high schools in New Mexico (26 percent), Alabama (42 percent), Tennessee (42 percent), Mississippi (44 percent), California (46 percent), Ohio (48 percent), West Virginia (48 percent), and Indiana (49 percent) reported this to be the case. (See Table 10.)
- *Video instructional materials* were used regularly by the majority of the high schools in almost all of the states. Lower rates of use were reported for New Mexico (32 percent), and West Virginia (43 percent). (See Table 10.)
- Although various forms of *monetary incentives* were reported by low percentages of schools in most states, a few states stood out as exceptions as a result of state legislation mandating or supporting such practices. For example, North Carolina and Tennessee had by far the largest percentages of schools reporting both *administrator incentive pay* (44 percent and 42 percent respectively) and *teacher incentive pay* (50 percent and 46 percent respectively). (See Table 11.)

These data indicate that high schools in many states are undergoing substantial change due both to state-level mandates and the initiatives of the schools and districts themselves.

Table 7.—Percentage of High Schools Reporting *Curriculum/Teaching* Restructuring Elements to Be "In General Use," by State (N=3,380)

State (*)	Cooperative learning	National math standards	Staff development	Thinking skills	Outcome-based education	School-to-work transition	Alternative assessment	Interdisciplinary teaching
Alabama (38)	32	34	13	32	74	42	18	5
Alaska (17)	35	29	77	35	12	24	35	29
Arizona (44)	50	36	32	27	16	23	18	25
Arkansas (46)	39	41	59	44	24	17	13	11
California (411)	68	38	54	38	27	20	26	18
Colorado (34)	62	44	38	29	24	35	35	21
Connecticut (79)	48	54	37	27	17	20	23	32
Delaware (16)	56	63	31	31	6	25	38	25
Dist. of Columbia (7)	29	57	29	57	71	29	43	57
Florida (82)	34	48	35	16	44	31	18	11
Georgia (63)	44	51	35	33	52	35	19	25
Hawaii (10)	70	50	40	50	50	40	20	50
Idaho (45)	36	42	20	24	4	13	16	13
Illinois (128)	44	49	27	31	26	33	16	18
Indiana (90)	32	36	13	14	8	16	12	19
Iowa (68)	57	37	41	28	10	25	22	15
Kansas (39)	41	33	36	26	15	13	15	21
Kentucky (39)	64	56	67	49	33	44	67	33
Louisiana (50)	26	36	28	34	66	22	16	10
Maine (49)	61	45	35	14	6	10	18	22
Maryland (66)	53	61	27	46	42	27	36	24
Massachusetts (118)	45	42	28	24	15	19	12	24
Michigan (160)	45	48	23	23	24	19	24	18
Minnesota (35)	29	43	26	23	20	11	11	17
Mississippi (23)	35	30	70	48	74	39	22	9
Missouri (62)	40	40	27	27	10	19	15	19
Montana (31)	39	52	39	16	19	19	19	23
Nebraska (57)	47	51	28	32	4	19	11	11
Nevada (16)	50	50	6	31	38	25	25	31
New Hampshire (37)	60	54	19	27	5	5	8	19
New Jersey (141)	46	67	23	43	62	18	23	22
New Mexico (19)	32	26	26	26	21	21	11	11
New York (123)	42	51	16	31	37	11	20	20
North Carolina (84)	49	60	43	37	39	54	18	21
North Dakota (12)	33	42	25	25	8	17	0	0
Ohio (191)	33	54	14	20	20	19	17	9
Oklahoma (48)	48	48	60	38	19	38	27	8
Oregon (82)	51	42	24	23	20	31	24	28
Pennsylvania (191)	42	47	24	33	13	19	16	16
Rhode Island (15)	40	47	13	33	20	27	27	33
South Carolina (39)	62	54	62	51	31	41	13	13
South Dakota (26)	50	65	19	39	8	27	15	15
Tennessee (48)	42	52	48	46	40	38	31	23
Texas (63)	54	48	60	49	46	33	21	24
Utah (31)	42	68	48	36	32	29	13	16
Vermont (24)	63	46	50	13	13	21	29	42
Virginia (89)	52	53	49	33	29	28	21	30
Washington (72)	57	39	39	28	8	19	13	24
West Virginia (21)	48	48	29	33	67	29	29	24
Wisconsin (56)	50	45	32	23	5	30	11	34
Wyoming (18)	44	28	44	11	22	17	11	11

* Number of responding schools

Table 8.—Percentage of High Schools Reporting *School Organization* Restructuring Elements to Be "In General Use," by State (N=3,380)

State (*)	School governance	Site-based management	Teacher team responsibilities	Transition to upper grades	Teacher -advisee system	School-within-a -school	Block schedule	Total Quality Management	Divisional organization	Longer school year
Alabama (38)	16	37	21	18	18	8	11	18	5	0
Alaska (17)	41	35	29	29	29	18	47	12	24	0
Arizona (44)	34	30	25	11	5	11	25	11	14	0
Arkansas (46)	39	22	20	17	9	11	11	9	15	0
California (411)	65	43	23	11	5	13	9	10	9	2
Colorado (34)	77	56	35	21	18	18	47	9	3	0
Connecticut (79)	39	33	22	17	5	13	4	6	5	0
Delaware (16)	44	19	25	31	13	13	19	13	0	0
Dist. of Col. (7)	86	29	57	29	43	71	57	14	29	0
Florida (82)	68	37	29	18	17	22	9	13	11	4
Georgia (63)	48	32	33	25	33	11	10	13	2	0
Hawaii (10)	50	20	50	0	0	20	40	0	10	0
Idaho (45)	27	33	16	16	4	9	22	9	18	0
Illinois (128)	37	32	25	16	17	11	6	11	7	0
Indiana (90)	33	29	20	13	9	3	9	6	4	0
Iowa (68)	54	29	32	21	16	9	4	7	4	2
Kansas (39)	56	41	21	18	15	15	8	8	13	0
Kentucky (39)	74	56	39	18	15	15	18	10	15	3
Louisiana (50)	34	14	14	22	4	14	10	12	8	0
Maine (49)	20	47	20	25	14	14	27	2	12	0
Maryland (66)	53	14	33	21	11	18	9	12	3	0
Mass.(118)	30	28	11	25	2	11	8	2	6	0
Michigan (160)	49	34	29	16	7	6	4	6	5	0
Minnesota (35)	34	20	11	14	26	11	9	6	6	3
Mississippi (23)	57	35	30	26	13	4	22	13	13	0
Missouri (62)	48	31	29	13	21	7	7	8	3	2
Montana (31)	26	42	45	16	3	7	0	3	13	0
Nebraska (57)	35	39	28	25	23	5	2	9	11	2
Nevada (16)	31	44	25	25	6	19	19	13	25	0
N. H. (37)	27	41	14	16	16	8	0	5	14	0
New Jersey (141)	33	19	18	19	12	12	12	9	6	0
New Mexico (19)	47	37	26	5	11	11	5	5	5	0
New York (123)	38	17	16	20	10	15	9	6	4	1
North Carolina (84)	50	50	35	17	21	12	16	14	12	0
North Dakota (12)	17	8	8	17	0	0	0	0	0	0
Ohio (191)	34	18	26	16	5	5	5	9	5	1
Oklahoma (48)	44	52	38	29	8	8	2	19	23	0
Oregon (82)	46	44	28	13	24	15	12	5	17	0
Pennsylvania (191)	30	20	19	19	8	9	11	5	7	1
Rhode Island (15)	40	27	20	33	0	7	20	0	7	0
South Carolina (39)	82	39	44	10	8	13	28	8	5	0
South Dakota (26)	42	42	50	27	15	19	0	19	19	0
Tennessee (48)	42	25	31	23	29	13	13	10	15	4
Texas (63)	86	67	35	18	18	21	16	29	8	0
Utah (31)	48	36	32	36	26	7	42	16	7	0
Vermont (24)	25	58	25	8	13	13	13	0	8	0
Virginia (89)	46	20	18	23	9	18	21	14	7	2
Washington (72)	50	36	25	17	15	7	8	4	8	0
West Virginia (21)	81	43	29	29	14	10	19	29	14	5
Wisconsin (56)	43	21	32	13	13	14	9	9	5	0
Wyoming (18)	28	39	11	6	17	11	11	6	11	0

* Number of responding schools

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Table 9.—Percentage of High Schools Reporting *Community Outreach* Restructuring Elements to Be "In General Use," by State (N=3,380)

State (*)	Community use of school	Allied youth services	Business/industry alliances	School/college partnerships	Adult volunteer program	Community service
Alabama (38)	40	61	50	45	24	3
Alaska (17)	82	53	47	41	35	24
Arizona (44)	43	39	39	36	30	9
Arkansas (46)	28	39	33	46	33	4
California (411)	62	46	43	39	33	6
Colorado (34)	56	56	44	38	38	24
Connecticut (79)	80	66	52	41	32	10
Delaware (16)	50	44	50	31	31	13
D. C. (7)	14	29	57	43	14	86
Florida (82)	56	50	56	45	56	24
Georgia (63)	60	64	70	33	29	5
Hawaii (10)	90	70	80	50	30	0
Idaho (45)	64	47	33	29	11	2
Illinois (128)	45	53	41	34	23	16
Indiana (90)	51	41	39	19	17	6
Iowa (68)	62	35	49	28	22	9
Kansas (39)	44	33	33	33	31	13
Kentucky (39)	59	69	69	49	23	13
Louisiana (50)	38	52	50	46	36	22
Maine (49)	82	47	37	37	27	8
Maryland (66)	64	50	47	30	50	42
Massachusetts (118)	66	45	41	29	27	6
Michigan (160)	74	47	49	29	21	12
Minnesota (35)	71	46	37	40	31	17
Mississippi (23)	52	52	70	57	26	9
Missouri (62)	61	42	55	42	37	21
Montana (31)	74	61	42	36	10	3
Nebraska (57)	65	49	37	35	16	18
Nevada (16)	69	81	63	44	50	19
New Hampshire (37)	78	60	46	16	24	3
New Jersey (141)	56	47	36	31	18	15
New Mexico (19)	32	37	63	32	32	11
New York (123)	60	55	32	36	21	22
North Carolina (84)	49	60	50	51	44	5
North Dakota (12)	83	50	42	17	25	17
Ohio (191)	54	51	44	35	21	15
Oklahoma (48)	58	63	50	50	44	6
Oregon (82)	55	50	37	35	32	16
Pennsylvania (191)	52	47	36	35	25	17
Rhode Island (15)	60	40	40	40	27	7
South Carolina (39)	36	49	62	41	44	10
South Dakota (26)	69	50	42	31	15	4
Tennessee (48)	48	46	63	44	33	8
Texas (63)	51	49	54	43	52	8
Utah (31)	61	55	39	58	29	13
Vermont (24)	63	46	42	42	21	17
Virginia (89)	67	60	55	43	45	17
Washington (72)	64	51	57	40	39	8
West Virginia (21)	87	57	81	62	38	5
Wisconsin (56)	79	55	54	34	21	11
Wyoming (18)	83	50	28	33	17	11

* Number of responding schools

Table 10.—Percentage of High Schools Reporting *Technology* Restructuring Elements to Be "In General Use," by State (N=3,380)

State (*)	Video instructional materials	Word processing applications	CD-ROM technology	Computer literacy	Modems	Multimedia systems	Distance learning	Integrated learning system
Alabama (38)	63	42	34	34	18	13	24	18
Alaska (17)	59	71	41	35	18	29	24	29
Arizona (44)	57	59	46	18	23	18	18	16
Arkansas (46)	59	54	37	50	4	11	26	17
California (411)	62	46	33	37	14	20	8	11
Colorado (34)	59	71	62	38	59	38	12	12
Connecticut (79)	70	72	52	24	29	22	15	14
Delaware (16)	56	50	38	13	25	19	6	6
Dist. of Columbia (7)	86	86	43	71	29	14	29	29
Florida (82)	57	51	38	48	20	18	13	21
Georgia (63)	60	52	48	32	24	32	18	18
Hawaii (10)	70	60	30	40	10	10	40	20
Idaho (45)	58	51	31	31	9	9	20	18
Illinois (128)	65	60	42	28	18	16	24	13
Indiana (90)	58	49	51	21	20	20	12	16
Iowa (68)	60	82	53	28	31	19	18	10
Kansas (39)	64	64	39	23	23	13	23	13
Kentucky (39)	72	74	54	31	23	26	23	26
Louisiana (50)	68	60	40	68	16	14	44	16
Maine (49)	74	84	63	96	27	20	27	10
Maryland (66)	68	68	46	29	29	18	18	17
Massachusetts (118)	60	53	43	28	22	16	25	5
Michigan (160)	59	57	41	71	21	18	19	9
Minnesota (35)	71	83	49	40	14	23	34	20
Mississippi (23)	83	44	17	57	4	13	22	22
Missouri (62)	65	55	48	24	27	31	29	11
Montana (31)	77	71	36	42	39	29	19	13
Nebraska (57)	60	88	67	58	28	16	25	18
Nevada (16)	75	56	25	94	13	25	19	6
New Hampshire (37)	73	73	60	89	30	24	5	8
New Jersey (141)	70	57	35	44	18	17	21	13
New Mexico (19)	32	26	32	11	21	16	0	16
New York (123)	71	57	46	46	24	19	8	12
North Carolina (84)	58	55	55	39	36	35	33	30
North Dakota (12)	50	83	33	50	50	17	33	17
Ohio (191)	55	48	34	22	18	12	16	11
Oklahoma (48)	73	69	50	29	17	19	25	25
Oregon (82)	62	66	54	39	33	20	22	13
Pennsylvania (191)	64	62	42	40	26	18	13	8
Rhode Island (15)	67	80	67	80	33	27	13	20
South Carolina (39)	62	59	46	28	31	23	21	23
South Dakota (26)	58	96	50	92	31	27	8	19
Tennessee (48)	73	42	38	33	13	23	21	19
Texas (63)	62	84	51	62	38	38	21	29
Utah (31)	74	90	36	77	19	36	39	32
Vermont (24)	58	63	42	46	21	21	8	13
Virginia (89)	78	74	56	55	38	27	29	26
Washington (72)	64	75	47	32	22	29	29	11
West Virginia (21)	43	48	33	24	19	14	43	24
Wisconsin (56)	80	82	68	46	23	27	5	11
Wyoming (18)	61	72	22	50	17	11	6	11

* Number of responding schools

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Table 11.—Percentage of High Schools Reporting *Monetary Incentives* Restructuring Elements to Be "In General Use," by State (N=3,380)

State (*)	Career ladder plan	Administrator incentive pay	Teacher incentive pay	Group incentive pay
Alabama (38)	5	0	0	0
Alaska (17)	18	6	0	0
Arizona (44)	14	2	11	2
Arkansas (46)	13	0	4	0
California (411)	24	2	5	2
Colorado (34)	24	15	3	3
Connecticut (79)	42	4	0	1
Delaware (16)	19	0	0	6
District of Columbia (7)	14	0	0	14
Florida (82)	24	5	1	0
Georgia (63)	11	0	2	0
Hawaii (10)	20	0	0	0
Idaho (45)	9	0	0	0
Illinois (128)	22	5	3	1
Indiana (90)	20	11	3	0
Iowa (68)	24	3	10	9
Kansas (39)	36	8	3	5
Kentucky (39)	15	0	3	0
Louisiana (50)	16	2	8	0
Maine (49)	18	0	0	4
Maryland (66)	36	5	6	5
Massachusetts (118)	20	4	3	0
Michigan (160)	25	4	0	0
Minnesota (35)	20	6	0	0
Mississippi (23)	13	0	0	0
Missouri (62)	27	10	10	2
Montana (31)	26	3	3	0
Nebraska (57)	23	11	7	2
Nevada (16)	31	0	0	0
New Hampshire (37)	14	5	3	0
New Jersey (141)	33	8	5	1
New Mexico (19)	0	0	0	0
New York (123)	38	7	4	3
North Carolina (84)	16	44	50	27
North Dakota (12)	17	8	0	0
Ohio (191)	19	6	1	1
Oklahoma (48)	42	4	0	0
Oregon (82)	28	0	1	0
Pennsylvania (191)	24	14	2	2
Rhode Island (15)	20	0	7	0
South Carolina (39)	13	3	3	15
South Dakota (26)	31	4	4	4
Tennessee (48)	79	42	46	4
Texas (63)	29	5	18	0
Utah (31)	90	10	39	32
Vermont (24)	8	4	4	4
Virginia (89)	20	10	14	0
Washington (72)	22	6	3	1
West Virginia (21)	19	0	5	0
Wisconsin (56)	25	4	0	0
Wyoming (18)	6	6	6	0

* Number of responding schools

Survey Findings Regarding Key Indicators of School Restructuring

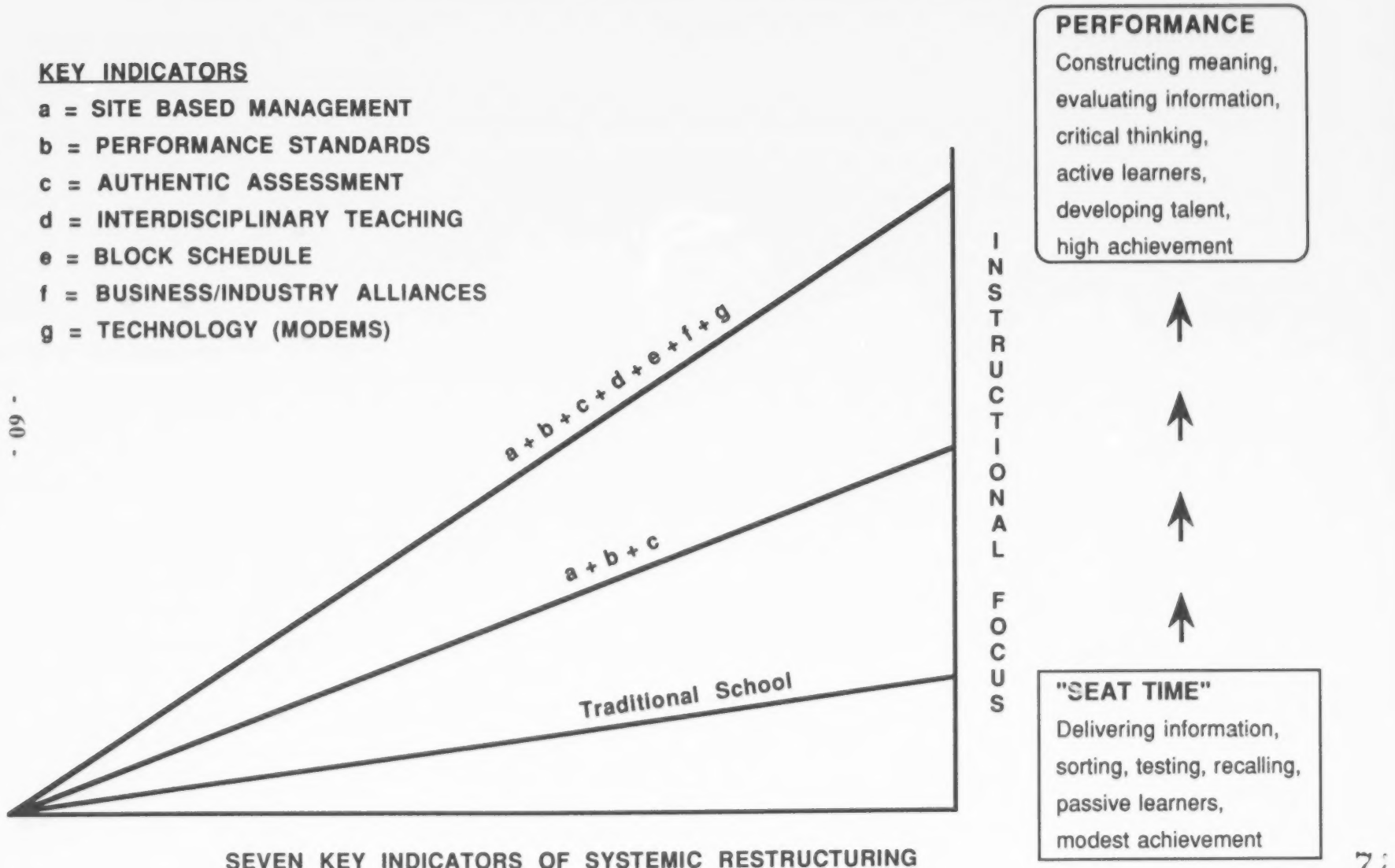
School leaders are being encouraged to give more consideration to *systemic* change, meaning they should simultaneously restructure a number of the major elements that contribute to improving the quality of instruction provided in the classroom. In order to examine how well high schools in this study have been able to implement such systemic change, seven of the 36 elements included in the study were selected as representative of the combination and extent of changes needed to provide a more productive and responsive system. The existence of these elements provides an indication of major restructuring occurring in a high school. The selected indicator elements are:

- *Outcome based education*, because it indicates that a high school has established clear performance standards for graduation.
- *Alternative assessment*, because this indicates that the school will follow through on measuring the outcomes or standards it has established.
- *Interdisciplinary teaching*, because this approach enables teachers in several departments to reinforce each other's pursuit of common outcomes and gives them the framework within which to create an integrated curriculum.
- *Site based management*, because it empowers the staff at the school level to assume more responsibility for improving its program.
- *Block schedule*, because it also fosters a team effort and affords more flexibility in planning instructional time.
- *Business/industry alliances*, because this represents an effort to involve the larger community in the educational process.
- *Modems*, because this technology element indicates a fairly sophisticated use of computers and perhaps networking to extend the school's access to information.

Figure 7 on page 60 presents a schema which hypothesizes that these seven elements, when combined, indicate a major degree of school restructuring. The instructional focus of the restructured school has shifted from an emphasis on *"seat time"* as the criterion for graduating from high school, to an emphasis on active student engagement and *performance* on clearly established standards. It can be contended that a traditional school produces only modest achievement, but that a school in which the seven key indicators of restructuring are properly functioning will produce high levels of achievement.

Of the 3,380 high schools that responded to the survey, only seven reported general use of all of these seven key elements that indicate a high degree of restructuring. If the elements of

Figure 7. – HIGH SCHOOL SYSTEMIC RESTRUCTURING SCHEMA



business/industry alliances and *modems* are not included, leaving only those elements dealing directly with the school's *curriculum/teaching* and *organization*, the list of high schools reporting the remaining five elements to be in general use only grows to 18. These results demonstrate how difficult it is to manage the fundamental changes that these elements produce.

One may ask: Should a high school attempt to simultaneously adopt all of the key elements suggested here, or is it better to phase in changes over several years? Some change theorists argue that it is better to undertake a full transformation, but practitioners find it difficult to manage such comprehensive change. Experience has shown that difficulties and resistance sometimes arise from implementing even a single element, such as a schedule change or establishment of standards.

There is little research evidence on the relative importance and difficulty of piecemeal vs. comprehensive change. What is known is that either route requires several years of work, and that school improvement is a continuing process that must be continually maintained to sustain the changes.

Does Restructuring Make a Difference?

No attempt was made in this study to report a summary of the professional literature and research on the effectiveness of high school restructuring. Actually, not a great deal of research has been reported in the professional literature, and serious difficulties exist in attempting to assess the interaction of many variables that are believed to contribute to school improvement.

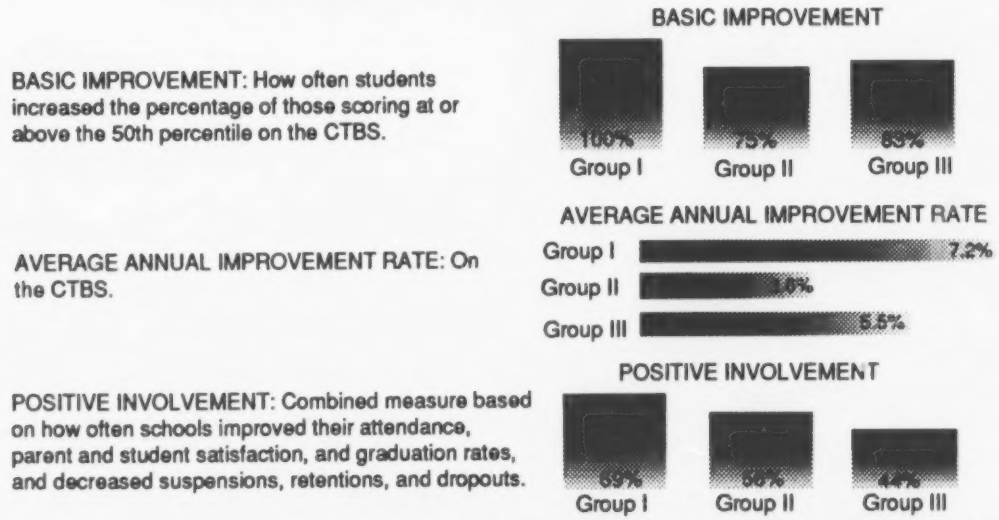
However, one study deserves special attention because the school district involved has had a sustained commitment to school restructuring for over a decade. An independent research report prepared by Regina Kyle for the Jefferson County Public Schools in Kentucky and the Gheens Professional Development Academy is summarized here.[4]

The Gheens Academy was established to provide leadership and support to Jefferson County public school personnel through training in such topics as participatory management, cooperative learning, working with the Coalition of Essential Schools, choice schools, and other restructuring topics. Based on eight years of work, the Academy identified three categories of high schools according to their sustained commitment to school restructuring. About 35 percent of the county's schools were in Group I; these schools had a record of three to five years of commitment to systemic restructuring. About 45 percent of the county schools were in Group II, a more initial stage of restructuring; these schools had been involved in some change, but on a more sporadic basis. The remaining 20 percent of the schools were in Group III, which consisted of schools that had not yet made a commitment to school restructuring.

The Academy examined whether there were differences in improvement in these three groups of schools. Schools in Groups II and III served as comparison schools and were selected to match Group I on the basis of socioeconomic and ethnic characteristics of students and student mobility rates. Three kinds of indicators were used: 1) growth in student achievement on the Comprehensive Tests of Basic Skills (CTBS); 2) the annual *rate* of change in achievement on these standardized achievement tests; and 3) change in such factors as attendance, parent and student satisfaction, retentions, and dropouts (termed positive involvement). Figure 8 on page 63 reports the patterns of improvement noted for Group I and the two comparison groups.

The data show that in the Group I high schools with a three-year to five-year commit-

Figure 8.—Effects of Sustained High School Restructuring Compared to Modest or No Restructuring, 1988-1991



Group I —Schools with three- to five-year history of sustained work on school restructuring in systemic fashion. Group II —Schools with more limited and fragmented work on school restructuring. Group III — Schools not significantly involved in school restructuring.

SOURCE: Kyle, Regina M. J. *Transforming Our Schools: Lessons from the Jefferson County Public Schools/Gheens Professional Development Academy 1983-1991.* Louisville, KY: Jefferson County Public Schools, 1993.

ment to restructuring, students increased the percentages of those scoring at or above the 50th percentile on the CTBS 100 percent of the time, compared to 75 percent of the time in Group II and 83 percent in Group III.

Students in Group I schools improved achievement on the CTBS at an annual average *rate* of 7.2 percent, compared to 3.6 percent for Group II and 5.5 percent for Group III.

Increases in attendance, parent and student satisfaction, and graduation rates, and decreased suspensions and dropouts were reported 69 percent of the time in Group I schools, compared to 56 percent and 44 percent for the control schools.

Because of the sustained commitment to restructuring needed to be included in Group I, it seems reasonable to attribute these differences in improvement to the schools' extensive involvement in restructuring.

The Jefferson County evaluation model reflects the recognition that school improvement should be based on growth in student performance and involvement. High schools undertaking school restructuring need to establish baseline data and develop a plan for keeping the faculty and parents informed of the results of the changes. No doubt more sophisticated and complex measures of student performance will emerge in future evaluative work to reflect the authentic assessment activities now being undertaken in many high schools. This kind of assessment requires that a faculty define excellence and establish performance measures in such areas as writing, speaking, understanding history, performing and understanding art, and applying mathematical or scientific thinking to real-world problems.

It is interesting to note that one of the seven schools reporting all seven of the key restructuring indicators in the current National Study of High School Restructuring was Fairdale High School of the Jefferson County Public Schools.

Conclusions and Implications of the Study

This National Study of High School Restructuring provides a portrait of work in progress as both public and private high schools seek ways to more effectively serve their students. The study found much to support and applaud in the pioneering work of many schools. However, it is also clear that most high schools have yet to address many of the issues discussed at the outset of this report.

Summary of Major Findings

Major findings of the report include:

- The study findings document the trend toward more participative management and leadership at the school level. Shared school governance, which involves teachers and parents in planning and decision making, is reported by almost half of the schools. The importance of decentralizing this process and shifting decisions to the school level is also indicated by the fact that 33 percent of the high schools report site based management to be in general use.
- Many high schools are engaged in a serious effort to produce deeper, more meaningful student understanding of important concepts in the disciplines. This conclusion is supported by the finding that about a quarter of the nation's high schools (26 percent) have established outcome based education, which provides specific learner outcomes or standards for graduation. In addition, 20 percent are making general use of alternative forms of assessment to ensure that students demonstrate meaningful acquisition of these outcomes, and 20 percent have implemented interdisciplinary teaching.
- About half of the high schools have developed plans to coordinate efforts to provide the services of medical, law enforcement, and other social service agencies in their community. The importance of state reform plans in encouraging this kind of collaboration is seen in Kentucky, where 69 percent of the high schools reported this element to be in general use in response to provisions of the state's Education Reform Act.
- About 1 in 10 reporting high schools are using the block schedule, and larger proportions have partially implemented this structure or plan to use it next year. This suggests a growing emphasis on giving teachers flexibility in planning instruction and opportunities to engage in staff development.
- Certain forms of instructional technology have become widespread in the nation's high schools; for example, approximately 60 percent of the schools report regular use of video instructional materials and regular opportunities for students to practice writing using a computer. The results indicate more limited use of other forms of technology such as distance learning, modems, and

multimedia systems, which are regularly used by less than a third of the high schools.

- In view of the need to train teachers in new and more effective instructional approaches, the lack of time devoted to staff development in teaching strategies remains a critical problem. Only about a third of schools (34 percent) report that they have comprehensive staff development programs as defined in the study.
- High schools still have room for improvement in involving the business community as partners in education. Slightly less than half of the high schools report that they have enlisted the active support of business/industry alliances in the educational process.
- High schools report minimal interest in various forms of monetary incentives that are often advocated. Although a quarter of the responding schools have career ladder plans in operation, few report the general use of individual incentive pay for teachers or administrators, and even fewer have group incentive pay plans in operation. The responding schools are perhaps employing other forms of recognition that were not included in this study.

The study found that many high schools across the country are deeply involved in restructuring activities. However, of the 3,380 high schools responding to the survey, only seven schools reported general use of all of the seven elements that were selected as key indicators of a comprehensive restructuring effort (site based management, outcome based education, alternative assessment techniques, interdisciplinary teaching, block schedule, business/industry alliances, and technology (modems). The finding that so few high schools have all of the key indicator elements in place suggests the difficulty of implementing and sustaining major changes in the structure and function of educational institutions.

Major Trends

The reform of the American high school can be expected to continue in the years ahead as communities attempt to better prepare their youth for college, the work force, and civic responsibility. This study, which sought to document the changes schools are undertaking to improve their productivity and effectiveness, revealed widespread restructuring activity in high schools across the nation.

America has some of the best high schools in the world, but large variations in quality make it clear that the quest for better high schools for all students must continue. Although many useful alternative models are emerging, the comprehensive public high school remains the most common institution for most high school students, and it will likely survive despite the push for school choice plans, charter schools, and various privatizing schemes that tend to reflect a lack of confidence in traditional schools.

Examination of the data from this study produces evidence of some underlying trends in the reform activity apparent in the schools.

- *The widespread involvement in standards-based reform affirms this report's assumption that the curriculum must be the centerpiece of restructuring work.* Over half the nation's high schools report some degree of involvement in outcome based education wherein serious efforts are being made to clarify what students will need to know and be able to do to graduate. Just under a half of

the nation's high schools report that the new mathematics standards have been fully incorporated into their existing curriculum. The years ahead will find the nation's high schools faced with the need to revamp their curricula in other fields to reflect national standards and state curriculum frameworks. While much work remains to be done, the attainment of "world class" standards of achievement for the nation's students continues to be a significant goal. Current state and federal legislation promises to buttress the standards-based reform activities already underway in many high schools.

- *The shift to much more collaboration and shared decision making is apparent from the data reported on democratic school governance, site based management, teacher teams, and community outreach activities.* Roughly a third to a half of the high school principals report that such restructuring elements are in place in their schools. This is a significant change from a few decades ago when high schools tended to be much more autocratically managed and isolated from other agencies in their communities. Today's parents are seeking more involvement, and the teacher empowerment trend continues. The trend toward greater collaboration perhaps affects student instruction most directly in the area of interdisciplinary teaching, where teaming helps teachers to reinforce one another's work and students to recognize important connections between the subjects they are studying.
- *A focus on systemic reform, which may be identified by key indicators of high school restructuring such as the seven described in this study, is essential if high schools are to become more significant institutions in the lives of students.* The veracity of the schema developed here to depict an "if-then" proposition needs to be tested, but the experience of Kentucky's Jefferson County Schools suggests that a significant increase in productivity accrues to students in high schools that focus on many restructuring elements simultaneously.

  The seven key indicators of systemic restructuring used in this report are based on a number of assumptions. One is that the locus of responsibility and authority must be decentralized, enabling the faculty to work on establishing and achieving standards of student performance demonstrated through multiple assessments. The block schedule and the use of interdisciplinary team teaching help to overcome the fragmentation of the school day and facilitate a more integrated curriculum and a greater variety of teaching activities. Business/industry alliances can add talent and resources to the teaching enterprise, and technology adds both power and efficiency. In short, this schema suggests how to redesign the system to shift from a "seat time/passive learner" model with modest achievement to a "student performance" model with higher achievement for all students.
- *The rate of change in the nation's high schools overall is highly variable but, on the whole, is sluggish with the more traditional institution still dominant.* While the many restructuring efforts described here are encouraging, large numbers of students still do not have daily access to computers to practice writing or other applications, a large proportion of the schools are still using the traditional schedule to teach school subjects in isolation, and too few schools report the es-

tablishment of specific standards for graduation, measured by authentic, performance-based assessment techniques.

Implications

It is reasonable to ask why more high schools have not undertaken serious restructuring work. The reasons appear to be complex, and include the generally conservative outlook of many school boards and parents who are well organized to resist change in many communities. This is seen in the caution exhibited by teachers and administrators themselves who reflect these communities, and who have limited opportunities to observe other high schools that have made changes. Teacher empowerment slows the rate of change initially by the participation that is required, but this approach is important if teacher commitment is to be ensured.

The public has been repeatedly reminded by some politicians that "you can't improve schools by throwing money at them," but this pronouncement is hard to reconcile in an urban high school with deteriorating facilities, transient teachers, little technology, and outdated textbooks. The huge disparity in spending for public education among districts is often lamented, but seldom addressed. In the meantime, the current trend toward privatizing schools, although slight, is not inconsequential, and schools remain vulnerable to symbolic legislation that offers faint hope of real solutions.

The slow pace of change is likely to continue until there are more successful models of high schools that have been restructured and that see improved student learning. Both state education agencies and the federal government should sponsor programs to stimulate development of exemplary schools across the nation. In order to demonstrate that such schools are more productive, much more research and development work and technical assistance is needed to help understand how a standards-based curriculum works, what is involved in developing assessment plans that demonstrate that students have attained high standards, and how revised schedules can facilitate more collaborative work by teacher teams. It must be recognized that change does not come easy, and that obtaining faculty "buy in" is essential if restructuring is to be taken seriously. This process usually must start by seeking agreement that change is needed in the first place. Risk takers need to be rewarded, and far more attention to incentive issues is needed at both the state and local level.

In addition to this developmental work, research is needed to ascertain whether, in fact, classroom learning activities in restructured schools are characterized by more active learners, diverse teaching strategies, a more integrated curriculum, and higher achievement. Practitioners are not only guided by what good research tells them, but they are also called upon to provide such evidence to boards of education as changes are considered. This responsibility rests with universities, regional labs, and other agencies equipped to do credible research.

The curriculum goals of the reform movement over the past several years have primarily focused on improving traditional academic areas, and the current work in developing voluntary national curriculum standards continues in that direction. This work is highly desirable because it creates greater consensus on what constitutes a robust program of general education for all students. However, to limit curriculum change to this arena is to perpetuate high schools' ambivalence about the need to help prepare students for transition to

the competitive world of work. Since roughly half of each year's graduates do not go on to college, this leaves millions of students with little preparation for the next phase in their lives. While legislation is pending in Washington on helping prepare students for high-skill, high-wage jobs, and performance standards for various vocations are being developed, a major effort is needed to increase awareness of the need for a major redesign of high school programs in the work preparation arena among parents, teachers, board members, and other policy makers.

An enormous amount of energy is going into development of national curriculum standards, and the official sanction of these standards over the next few years should substantially affect state curriculum frameworks and local district curricula, textbooks, testing, and teaching strategies. As with restructuring itself, if the substantive impact of new curriculum concepts is to broadly penetrate the schools, a massive task of staff development on both curriculum content and pedagogy lies ahead. If federal, state, and local agencies fail to address these two important issues systematically, and to provide appropriate resources, this failure will result in a tremendous waste of time and will shortchange students. Attention must also be given to the "opportunity to learn" issue to ensure that basic provisions are made for the qualified teachers, facilities, equipment, and instructional time allocations that will be essential to help students achieve the new content standards.

A sense of urgency about restructuring the nation's high schools is essential to continued improvement. The high school can play an even more central, vital role in the lives of the nation's youth if attention is given to the issues discussed here, and if educators move forward with a serious commitment to the difficult work of restructuring.

Notes

[1]Among the important studies of the American high school over the past decade are:

Boyer, Ernest. 1983. *High School.* New York: Harper and Row.

Cawelti, Gordon, and Roberts, Art. 1984. *Redesigning General Education in the American High School.* Alexandria, VA: Association for Supervision and Curriculum Development.

Goodlad, John I. 1984. *A Place Called School: Prospects for the Future.* New York: McGraw Hill Book Company.

Lightfoot, Sarah Lawrence. 1983. *The Good High School.* New York: Basic Books, Inc.

Sizer, Theodore. 1984. *Horace's Compromise: The Dilemma of the American High School.* Boston: Houghton Mifflin Company.

[2]For a convincing analysis of the "difficulty of task" concept, see William W. Cooley. "The Difficulty of the Educational Task: Implications for Comparing Student Achievement in States, School Districts, and Schools." *ERS Spectrum* Vol. 11 No. 3 (Summer 1993): 27-31. Cooley states, for example, that 75 percent of the state variations in mathematics achievement can be explained by the nature of the populations being served; the difficulty of the educational task is increased by the predominance of children who are in single-parent families, who are in poverty conditions, or whose parents are not high school graduates. When the difficulty of task is increased, clearly it is going to cost more to have all students attain high levels of achievement.

[3]Quality Education Data. 1993. *Technology in Public Schools, 1992-93.* Denver, CO: Quality Education Data.

[4]Kyle, Regina M. J. 1993. *Transforming Our Schools: Lessons from the Jefferson County Public Schools/ Gheens Professional Development Academy 1983-1991.* Louisville, KY: Jefferson County Public Schools, p. 27.

Appendices

Appendix A: Elements of Restructuring and Their Definitions

Appendix B: Demographics of Responding Schools

Appendix A:
Elements of Restructuring and Their Definitions

This appendix lists the five major components of restructuring, the 38 specific elements,* and their definitions in the order that they appeared on the survey questionnaire. For each element, survey respondents were asked to check one of the following choices: 1) Element *in general use* in my school; 2) *Partially* implemented; 3) Definitely *planned* for next year; or 4) Not planned for next year.

SCHOOL ORGANIZATION

- **Site based management** — School operates under plan affording wide latitude in delivering instructional program appropriate for your students which may vary from other high schools in district.
- **School governance** — School has mechanism such as school council which is elected or appointed and provides for involvement of teachers and parents in planning and decision making.
- **Total Quality Management** — Significant training has been provided in the Deming principles such as removing ratings and quotas, creating trust, and applying team approaches to the improvement of quality instruction, and efforts to apply these are underway.
- **Teacher-advisee system** — Each teacher is assigned a group of students who are provided with a "home base" for academic, vocational, or personal assistance/counseling; groups meet at least 20 minutes per day.
- **Teacher team responsibilities** — Responsibilities for curriculum development and teaching, evaluating student performance, and/or staff development are assigned to one or more teams of teachers with teams provided opportunity for regular meetings.
- **Within-school choices*** — Students are provided *within*-school option of a specialized program *(e.g., art, technology, etc.)*, in addition to taking required courses.
- **School-within-a-school** — School-within-a-school concept is used to create smaller student bodies to encourage student feelings of involvement and belonging.
- **Transition to upper grades** — Largely separate environment is provided for students in the lowest grade in the school to ease their transition into the upper grades.
- **Divisional organization** — For planning and scheduling purposes, teachers are organized into a few broad curricular areas rather than traditional departments.
- **Block schedule** — At least part of the daily schedule is organized into larger blocks of time *(more than 60 minutes, for example)* to allow flexibility for varied instructional activities.
- **School year** — School year has been extended to provide 200 days or more of instruction each year.
- **Heterogeneous grouping*** — One or more departments use heterogeneous grouping of students in required subjects.

CURRICULUM/TEACHING

- **Outcome based education** — School has a clear set of general learner outcomes on which students are or will be expected to demonstrate proficiency prior to graduation.
- **Interdisciplinary teaching** — At least one class is team taught by teachers from *different* disciplines in effort to provide more integrated learning experiences.
- **National mathematics standards** — Math program reflects standards developed by the National Council of Teachers of Mathematics in 1989.
- **Thinking skills** — Majority of teachers (as a result of staff development activities provided by the district or that they received elsewhere) are using teaching strategies to help develop such student attributes as problem solving and critical thinking.
- **Alternative assessment techniques** — One or more departments has developed and made use of assessment techniques that incorporate use of student portfolios, projects, and/or performance exams geared more closely to adult needs in their fields.

*Two elements, *within-school choices* and *heterogeneous grouping*, appeared on the survey questionnaire but were not included in the final data analysis. The almost universal positive responses to these items suggested that their definitions may not have been clearly understood by respondents.

- **School-to-work transition** — School collaborates with local community colleges and/or businesses to provide training in the skills needed for positions that are likely to be available for them on graduation; such efforts include apprenticeships and "tech prep" programs.
- **Staff development** — Majority of teachers are provided six or more days of school- or district-programmed staff development focusing on expanding their use of varied teaching strategies.
- **Cooperative learning** — Teachers in one or more departments are using cooperative learning techniques.

COMMUNITY OUTREACH

- **Community school** — School is open on a daily basis before and/or after school for use by community for recreation, education, and/or civic purposes.
- **Business/industry alliances** — One or more businesses in the community routinely provides resources, consultation, or learning experiences for students.
- **Allied youth services** — School personnel coordinate efforts with community medical, law enforcement, and/or other social services to insure that the needs of students are met.
- **Adult volunteer program** — On-going program exists to recruit and coordinate efforts of adults who volunteer to tutor or assist with other school functions.
- **Community service** — Students are or will be required to perform a specific number of hours of community service in order to graduate.
- **School/college partnerships** — School is regularly involved with one or more nearby colleges or universities in efforts directed toward improving teacher training, staff development, or preparing students for school/college transition.

MONETARY INCENTIVES FOR STAFF

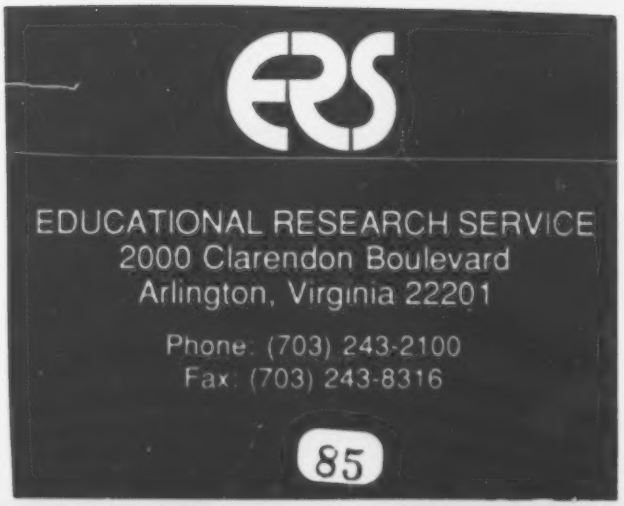
- **Teacher incentive pay** — Incentive pay program for teachers *(salary increments or bonuses for outstanding performance)* exists.
- **Administrator incentive pay** — Incentive pay program for building administrators *(salary increments or bonuses for outstanding performance)* exists.
- **Group incentive pay** — A *group* of teachers may earn incentive pay for a joint project found to have significantly contributed to goals or outcomes designated as important to the school.
- **Career ladder plan** — Salary schedule for teachers includes provisions for extra pay for additional responsibilities for staff supervision, curriculum development, or related activities.

TECHNOLOGY

- **Distance learning** — School is regularly involved in interactive transmission of televised instruction from a distant location via satellite or cable systems for course credit or general delivery of information.
- **Integrated Learning System (ILS)** — Regular instructional use is made of a comprehensive software systems (ILS) which usually operates out of a local area network in a lab or the classroom; the ILS offers instructional activities and includes a management system that monitors student performance.
- **Computer literacy** — Students are required to demonstrate at least basic proficiency in use of microcomputer and with a word processing program in order to graduate.
- **Word processing applications** — Students are routinely provided with opportunities to use computers for practicing composition and editing skills using word processing programs.
- **Video instructional materials** — One or more of the school departments regularly employs commercial videotape or videodisc materials as an instructional tool to supplement textbooks.
- **CD ROM technology** — Students make routine *in-school* use of CD ROM technology *(encyclopedias or other databases)* for retrieving information.
- **Modems** — Using modems, students routinely access information from a variety of data banks and other sources *outside the school.*
- **Multimedia systems** — School has one or more systems that allow teachers and/or students to combine text, data, audio, graphic, animation, and/or still or moving video into a computer-controlled interactive product.

Appendix B:
Demographics of Responding Schools

Category	Percent of Respondents (N=3,380)
School Enrollment Size:	
Fewer than 500	27.9%
500-999	31.9%
1,000-1,499	20.7%
1,500-2,499	15.8%
2,500 or more	2.4%
No response	1.4%
Grades Included in School:	
K-12 or 6-12	4.2%
7-12 or 8-12	13.6%
9-12	75.3%
10-12	6.0%
11-12	0.2%
No response	0.8%
Type of Community:	
City of over 300,000	9.5%
City of 5,000-299,000 (not suburban)	28.4%
Suburban	27.5%
Small town (under 5,000)	15.7%
Rural	18.0%
No response	0.9%
Type of Support:	
Public	89.0%
Parochial or diocesan	4.5%
Private, religious	4.3%
Private, not religious	1.8%
No response or other	.4%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